

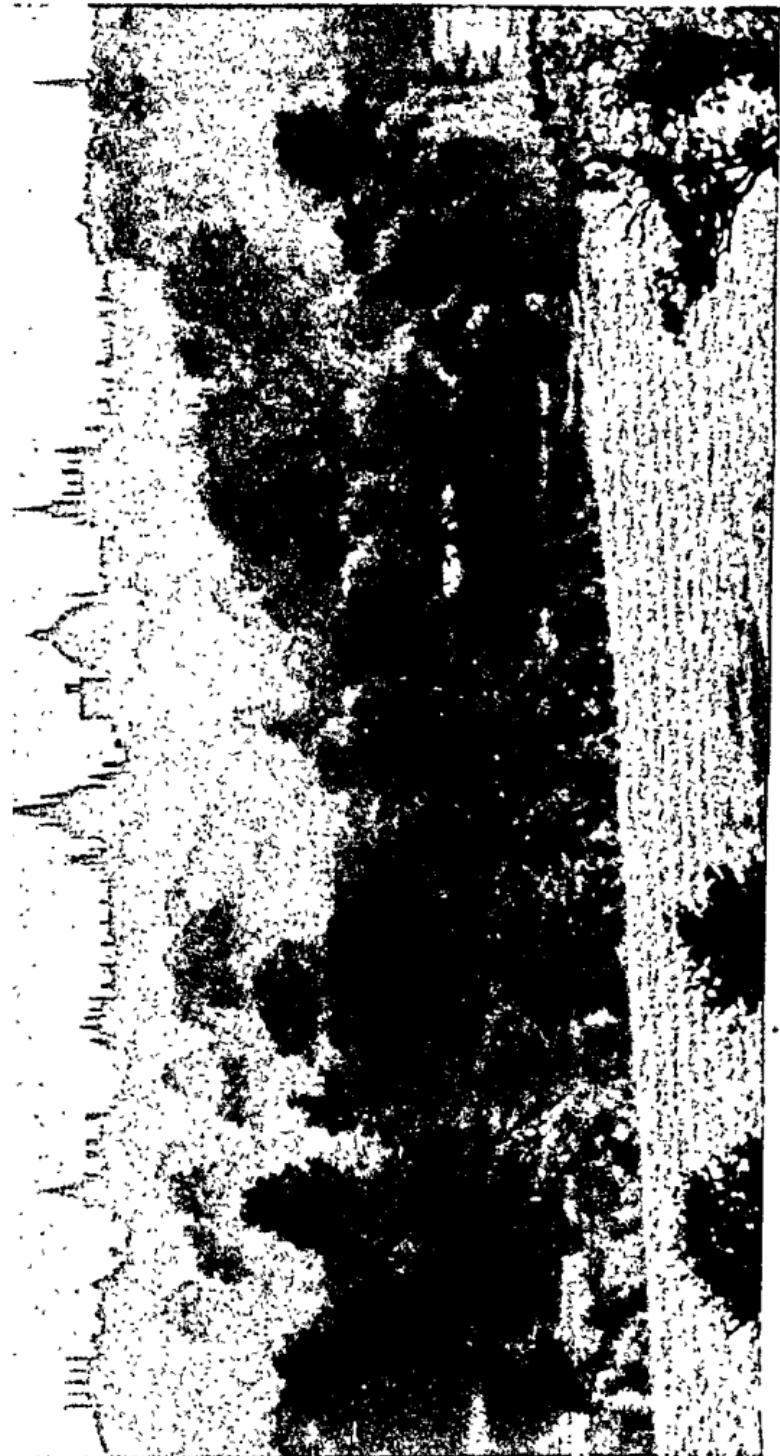
OXFORD

1935

A SOUVENIR OF
THE WORLD
EDUCATIONAL
CONFERENCES



OXFORD UNIVERSITY PRESS



OXFORD FROM ELSFIELD

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PREFACE

THIS Handbook has been prepared by the Local Committee organizing the Oxford Synchronized Conferences 1935 in order that our visitors may have in convenient form a description of the life and surroundings of the University and City of Oxford. Two-thirds of the book, pages 1 to 244, have already appeared as *The Handbook to the University of Oxford*. We are very much indebted to its publishers, the Oxford University Press, for allowing us to borrow these pages and to bind up with them articles on subjects not dealt with in the Handbook. I also wish, as Editor, to express the thanks of the Press Committee to those who have so willingly contributed the special articles, and my own thanks to the Publications Committee, and particularly to its Chairman, Mr. Cole, and its indefatigable Honorary Secretary, Miss M. W. Overend, B.A., who, with the Press, have reduced my task almost to a sinecure.

The programme of the Synchronized Conferences, and the particular interests of the constituent bodies, have been described elsewhere; but it gives the Press Committee particular pleasure to be able to print as a foreword to *Oxford 1935* a message from the Hon. Oliver Stanley, M.P., President of the Board of Education. His predecessor, Lord Halifax, as Chancellor of the University, will honour the Conference by his presence at the official opening ceremony.

Perhaps the most important service of Conferences such as these is in providing outside the formal meetings for discussions between member and member. An assemblage with so wide a variety of national outlook has never before, I think, been brought together in one Conference to discuss Education, and those of us who live and work in Oxford are looking forward to receiving in exchange for this description

Preface

of our own modest endeavour a rich harvest of experience from many other countries. We hope that our visitors will enjoy their stay in Oxford, and we thank them for coming.

CITY EDUCATION OFFICES

July 12 1935.

A. C. CAMERON

Editor.

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(Photo Speaight)

THE RIGHT HON. OLIVER STANLEY
MINISTER OF EDUCATION

FOREWORD

I AM very glad to be able to contribute a Foreword to the Handbook which is issued in connexion with the World Federation of Education Associations at Oxford in August 1935.

International relations are perhaps at this moment not at their happiest, and, after a period during which an earnest endeavour was made to put into practice the ideals underlying the League of Nations, some at least of the great Powers have now frankly rejected the idea briefly described as internationalism in favour of an ardent, and sometimes bitter, nationalism. Nevertheless, in many spheres a great deal of sound work is, in fact, being done by international co-operation, and it may well be hoped that the scope of this work will gradually be extended so as to include eventually the major problems.

To my mind there are three main objects to be achieved by international conferences. The first—and perhaps the most important—is to enable individuals to examine at first hand the detailed administration of foreign countries and so to provide themselves with an informed background for their study of general world policy. The second object is to provide a sort of clearing-house so that the best ideas of one nation may be appropriated to the common stock of world knowledge and experience. And the third object is to bring together in the sympathetic atmosphere of a common quest students of all countries, in the assurance that they will by this means take back with them a greater measure of understanding and fellowship and a greater will for international peace.

These objects we may hope will be achieved by the present Conference. Education is a subject on which all the nations of the world can join hands in their common desire to benefit the rising generation; at the same time, education also provides sufficient scope for disagreement on matters of detail to ensure a healthy and intelligent discussion.

Foreword

Oxford has been marked out from the very earliest times by its position and circumstances as a University town. As Dr. Rashdall says in his great *History of the Origin of Universities*: 'Hardly another town could be named which satisfied in equal perfection the requirements of the case.' Geographically it was admirably placed by nature to take a leading part in the academic and political life of England. For 750 years it has attracted within its walls students from all parts of the world, and its power of attraction has grown with its beauty. But Oxford was also one of the first to realize that a University has functions which transcend its own walls. The University Extension movement and the hospitality of all kinds have contributed in no small measure to the fair reputation which Oxford enjoys to-day.

I believe that Oxford will be able to learn much from the Conference which assembles there this year, and I feel certain that those who attend the Conference cannot fail to derive much from the inspiration and beauty of the city in which they meet.

OLIVER STANLEY

A SHORT HISTORY OF THE UNIVERSITY OF OXFORD

By SIR CHARLES MALLET

THE MEDIEVAL UNIVERSITY

I

THE University of Oxford may be said to date from the reign of King Henry II. There is no ground for attributing its foundation to King Alfred, and there is little reason to think that it originated in the cloisters of St. Frideswide's or in the early monasteries near. But there is truth in the tradition which places an ancient Saxon convent on the spot where Christ Church stands. The monks of Abingdon had great possessions long before the Norman Conquest. The Collegiate Church of St. George within the Castle, and the Abbeys of Eynsham and Oseney outside, no doubt, brought clerks to Oxford in early Norman times. Henry I, we are told, delighted in their conversation. He built a palace at Beaumont, where his indefatigable grandson often stayed, and there are traces of lectures being given to Oxford students in his day. Theobald of Étampes—‘Stam-pensis’—a Master from Caen, was teaching clerks in Oxford before 1117. Robert Pullen, a well-known theologian, and Vacarius, a great Lombard jurist, possibly taught there about 1133 and 1149. And in the latter part of the twelfth century such simple schools as already existed developed, rather suddenly it seems, into a *Studium Generale*, a home for Masters and students gathering from all parts. Abroad, especially in Bologna and in Paris, great schools were coming into being, in which the *universitas*, the whole body of Masters or students there collected, established corporate organizations, with privileges and customs of their own. Paris had grown, under Abélard and his successors, into the first city of teaching in the medieval world, and Englishmen had

History of the University

flocked to study in the far-famed schools upon the Seine. But about 1167 foreign-born scholars were driven out of Paris for a season, and Henry II, in his quarrel with Becket, checked the flow of English clerks across the seas. The students so displaced must have sought a new centre of learning. The Masters whom they followed must have set up their chairs elsewhere. The rapid growth of the schools of Oxford after the year 1170 makes it highly probable that the transference of students from Paris was a principal cause of the new development here. From the days of Henry Beauclerc onwards the teachers of Oxford have a place in history. As Becket lay dead by the altar steps at Canterbury the life of the first English University began.¹

The guild of teachers which grew up at Oxford before the end of the twelfth century brought most of its customs probably from Paris. A degree was originally nothing but a licence to teach, which the earliest teachers asked the Church to sanction. The chief object of study in the Middle Ages, and the chief aim of the great Scholastic debates, was to reconcile the traditions of the Church with the growing demands of philosophy and learning. Latin was the Church's language. Logic was an instrument for explaining its theology. Plato's ideas were worth recovering because they seemed to throw light on the nature of God. Aristotle was regarded by many as the greatest of all Masters, because his method of analysis helped to elucidate the problems of the faith. But the Oxford Masters, though under the shadow of the Church, enjoyed an unusual degree of independence. The Head of their Schools, the Chancellor, was the Bishop's representative. But the Bishop was at Lincoln, far away. At an early date the Chancellor at Oxford became the Masters' nominee. Before long he asserted his independence of the Bishop. And the judicial powers which he derived from the Bishop he passed on successfully to the University itself.

¹ For a fuller account of the origins of the University see Sir Charles Mallet's *History of the University of Oxford*, 3 vols. (Methuen).

In the early history of the University a few clear dates stand out. An incident in the winter of 1208-9, in which one or two clerks were hanged by the townsmen, scattered the scholars for the moment, and led to a sharp quarrel between Church and State. The townsmen, though backed by King John, had to yield. In 1214 the Pope's Legate dictated terms in a famous Ordinance, the first of the University's Charters. The townsmen agreed to limit their rents, and undertook to pay a small tribute to the University for ever. That payment, taken over by the Eynsham monks and later by the Royal Treasury, still goes on. University Chests were established to receive it and any other small endowments which the University secured. The first step had been taken in imposing the University's authority on the town. In the years which followed disorders frequently recurred. Once, in 1238, there was a riot which mobbed a Papal Legate, and both townsmen and students suffered for the affront. In 1244 and again in 1268 there were great quarrels with the Jews, then rich and powerful, who probably took advantage of impious students. More than once—conspicuous dates are 1252, 1274, and 1334—there were fierce quarrels between the rival Nations, Northerners and Southerners, among the scholars. And again and again there were outbreaks of ill-feeling between Town and Gown, outbreaks amounting at times to battles, when the lanes around St. Mary's ran with blood.

There were outbreaks of this nature in 1228 and in many of the years which followed. There was a great riot, not unconnected with politics—Simon de Montfort and the Barons were then in arms against the King—which led to a secession of discontented students in 1264. There was another which caused a famous secession to Stamford seventy years later. But the most formidable of all these disorders were the two great fights between the scholars and the townsmen in 1298 and in 1355. In 1298 the townsmen complained to the

History of the University

King that the criminals of two counties made their home in Oxford and wore the habit of Oxford clerks. In 1355, on St. Scholastica's Day, long remembered as a black day in Oxford history, the countrymen poured in through the gates of the town in overwhelming numbers, broke into the halls and fired them, attacked even a procession of Friars and dashed the crucifix to the ground. From almost all these encounters the University, with Church and King behind it, emerged stronger than before. Its claims were not all usurpations. It needed a voice in preventing exactions, in fixing rents and regulating prices. But the Royal Charters, from 1244 onwards, steadily extended the privileges of the scholars, and after the Slaughter of 1355 the Chancellor acquired an almost irresistible authority over the trade and independence of the town.

As the thirteenth century proceeded the University's power and importance grew. Hundreds of students of all ranks and classes, many of them, no doubt, poor, and many of them very young, gathered in Schools Street by St. Mary's Church. Their numbers have been greatly overstated. In the thirteenth century an average of some 1,500 students seems likely, and that figure, if at times exceeded, may have fallen to something like 600 after the Black Death. They lived at first in lodgings, inns, and halls. And the small societies in the early halls may have enjoyed a good deal of independence, until they developed into boarding-houses ruled by Principals whom the University supervised. Living was often inexpensive: fees were low and teaching cheap. Eightpence or tenpence a week could be made to cover the cost of commons: two or three shillings a week could be made to cover most that a student had to pay. But the higher University degrees involved heavy expenditure as well as a long course of education. Most Oxford clerks in the Middle Ages probably had at least two meals a day and as much meat and beer as they needed. Fires were comparatively rare, and cold and darkness in winter too common. But the average student had his comforts, his bed, chair, table, chest, a manuscript or two

perhaps, and sufficient garments, tunic, tabard, toga, sometimes gaily coloured. If he were musical, he might have a lute or harp; if fond of fighting, a knife or sword or bow and arrows. And many of them, though clerks, were undoubtedly fond of fighting. Oxford had some fame in that respect, and most of the early statutes we possess, collected probably about 1275, are concerned with the maintenance of order. Some students also indulged in sports and pets, in cock-fighting and poaching, in dogs and hawks and ferrets. But such habits were not encouraged by the authorities. 'Unclean beasts' were denounced in regulations. Games of ball were curiously suspect. Dancing was the invention of the devil. Drinking and singing were less easy to repress, and drinking was of course the most frequent cause of disorder. But the songs of the students triumphed alike over discipline and care. Hymns and love-songs, devotional and dissolute, they come down to us curiously mingled: and the world of the singers is a world of joyous licence hardly held in awe by the authority of the Church.

3

St. Mary's Church, with the little Schools about it, was for long the centre of University life. It was not till the fourteenth century that the Old House of Congregation, a two-storied building added by Bishop Cobham of Worcester to the north-east of the Church, gave the University a habitation of its own.¹ Then the Lesser Congregation of Regents or teachers met in the lower story, and in the room above the first University Library was kept. It was not till the fifteenth century that an Abbot of Oseney built the first permanent block of Arts Schools,² or that the splendid Divinity School was begun.³ The Great Congregation of Regents and Non-Regents, the real Parliament of the University, met for long in the choir of St. Mary's; and the Faculty of Arts, sometimes called the Black Congregation, probably held in early days its own meetings in St. Mildred's Church

¹ Begun 1320.² 1439.³ From 1430 onwards.

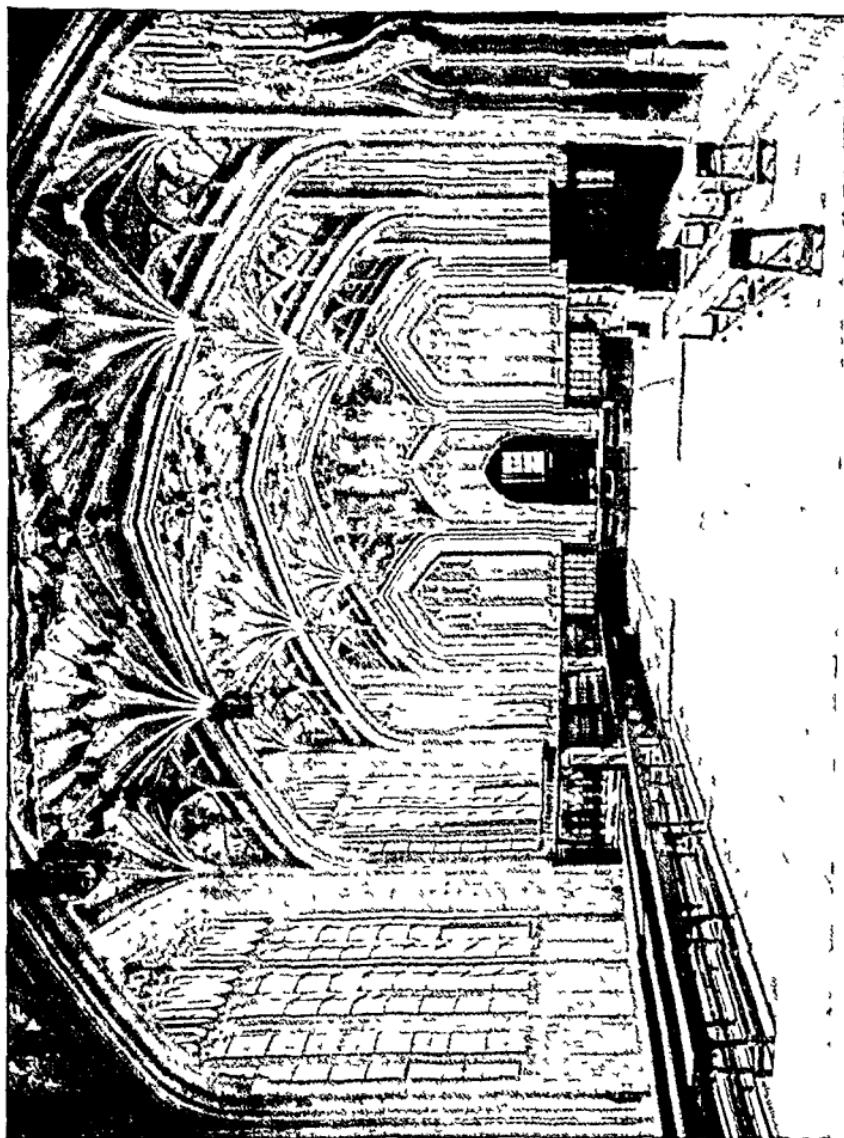
History of the University

near by. At St. Mary's, Edmund Rich, the first recorded Master of Arts, student and teacher, Archbishop and Saint, must have received his degree; and at St. Mary's early Chancellors presided, Ralph of Maidstone, Richard of Wych, and the magnificent Thomas de Cantelupe, the friend of both Earl Simon and King Edward. The Chancellor's jurisdiction steadily increased. His Court took cognizance of all sorts of offences. Masters and students as well as townsmen came under his authority, but the penalties he inflicted were as a rule light. The University Taxors date from King John. The University Proctors are first mentioned in 1248. And the system of University education grew and developed all the time.

The Seven Liberal Arts of ancient days were still the basis of teaching. The *Trivium*, Grammar, Rhetoric, and Dialectic, included the study of Latin and of logic, a smattering of classics and philology, and probably the elements of Roman Law. The *Quadrivium* included Music, Arithmetic, Geometry, and Astronomy, and taught at first little beyond the elements of each. At Oxford, where every scholar had to enter his name on the roll of a Regent Master, the basis of education was grammar, both Latin prose and Latin verse. Rhetoric and dialectic succeeded to grammar. Rhetoric taught men to compose and to persuade. Dialectic taught them logic, trained them in argument and disputation. Aristotle and Boethius provided them with text-books. Cicero and Virgil, Ovid and Terence, Livy, Tacitus, and Lucan, revealed the treasures of the past. But at Oxford the four Arts of the *Quadrivium* also held their own. Music attained in time to the honour of a degree. Arithmetic owed much of its importance to the Calendar; it helped, with astronomy, to fix ecclesiastical dates. Geometry was founded upon Euclid. Astronomy was based on Ptolemy's system, in which sun and planets revolved around the earth. It was closely allied to astrology. The stars, in the opinion of many serious students, still ruled over the destinies of man.

The Seven Arts were supplemented by the Three Philoso-

I. THE DIVINITY SCHOOL



phies. Natural Philosophy opened the world of science. Moral Philosophy examined the meaning of duty, conscience, will. Metaphysical Philosophy peered into the problems of the origin and future of mankind. In each field alike, in logic and rhetoric, in physics and metaphysics, in ethics, politics, and economics, Aristotle was the indispensable guide. Under the shadow of his name the Arts course, the basis of the University system, prospered, though there were probably many arts students who never advanced to a degree. For two years the Arts student attended lectures, took part in exercises, learned to analyse, to discuss and to debate. The disputationes of his third year led up to Responses in his fourth. After that he proceeded to Determination, satisfied a board of Masters that he had read the necessary books and completed the necessary exercises, and proved himself able to dispute. At Determination he passed into the rank of Bachelors; but three more years were needed before the still more elaborate ceremony of Inception could take place. Then at last the Arts student received the Master's degree and took rank as a Regent or teacher. For the higher Faculties, Medicine, Law, Theology, years of further study were needed and heavy costs were generally incurred.

Theology ranked as the supreme science. The University depended on the Church, and the clerks of Oxford were quick to feel the new impulse to religion given by the Friars. In 1221 the Dominicans appeared as preachers in the Jewry, and some three years later the Franciscans followed in their steps. In 1244 the Grey Friars secured permission from the King to break through the south wall of the town and to make themselves a home among the marshes of the Thames. There their Schools soon became famous. Robert Grosseteste, who taught in the Friars' Schools before he passed on to a bishopric, was one of the strongest friends of the young University. Adam Marsh, the 'Illustrious Doctor', was counsellor and mentor to Simon de Montfort. And Roger Bacon, devoted admirer both of Adam and of Grosseteste, carried the learning of the Friars to heights which made men

History of the University

count him a magician. Other Friars followed the Franciscans, notably the Carmelites in Beaumont and the Augustinians near Smith Gate. The Friars had their differences with the University. But their teachers fascinated Oxford thought. The discovery of Aristotle's scientific writings, an intellectual revolution for thirteenth-century Europe, gave fresh interest to the age-long effort to explore through philosophy the problems of life. Thomas Aquinas, the great Dominican, set himself to prove that Aristotle and Plato were alike forerunners of the Christian faith. The old controversies between Realists and Nominalists, which had absorbed the earlier Schoolmen, gave way to new Scholastic problems even more audacious and intricate. John Duns Scotus lectured in Oxford probably about 1300. William of Ockham with his destructive criticism startled the next generation and became a dangerous opponent of the Popes. Both of these great speculative leaders learned to think in the Franciscan Schools.

Wycliffe was no Friar but a practical reformer. He taught Oxford to apply the fearless spirit of the Schoolmen to the abuses of the medieval Church. But even now a curious uncertainty hangs over his Oxford career. He was Master of Balliol in 1360-1. He may very probably have been Warden of Canterbury College later. He was a well-known theologian with a great following in the University when he stepped into politics as an ally of John of Gaunt. The poor priests whom he sent out to teach his doctrines were in spirit not unlike the early Friars. His tracts appealed to his countrymen in trenchant English. His protest against Papal encroachments, his searching criticisms of the doctrine of Transubstantiation, and above all his great translation of the Bible, roused strong enthusiasm among Oxford men. Years passed before authority and reaction triumphed, before Archbishop Arundel and his successors stamped out for a time the movement for reform in the Church.

Papacy shook the foundations of religion. Bishops 'lived high in the King's Court', but the spirit and influence of the Church declined. 'Wicked and debauched persons', it was said, secured degrees at Oxford: 'virtue and learning went barefoot'. The halls decayed, though every scholar was now required to reside in some hall or college. Numbers declined. The old love of disorder showed itself, and in the country, under weak administration, it developed into Civil War. Yet the Lancastrian Princes were good friends to the University. Cardinal Beaufort, once Chancellor of Oxford, was a commanding figure in the State. Duke Humphrey of Gloucester was a notable patron. The list of Chancellors included several eminent men—Richard Courtenay, who defied Archbishop Arundel, Gilbert Kymer, a prominent Court physician, Thomas Gascoigne, a bustling, picturesque reformer, Doctors and Bishops of influence in their day. But great prelates, a Bourchier, a Neville, a Morton, immersed in political business, could not be expected to live in Oxford, and the Chancellor became more and more an absent dignitary, while the resident Vice-Chancellor represented him and did the work.

Complaints of poverty continued to be very frequent. Yet the University found money for great designs. The new Divinity School was a noble building. The new Library added above it, and endowed with Duke Humphrey's famous books, offered a worthy example for Bodley to surpass. Before the new Library was finished St. Mary's had to be largely rebuilt. New University Chests were founded, but their contents were not always properly looked after. And one new development of great importance saw a Press in the High Street printing Oxford Books. Far away in Italy new days for scholarship were dawning. Greek manuscripts were flowing into Western libraries. Oxford students began to find their way across the Alps. Richard III, visiting the University in 1483, found a new spirit moving in the world of learning. The Middle Ages had begun to pass away.

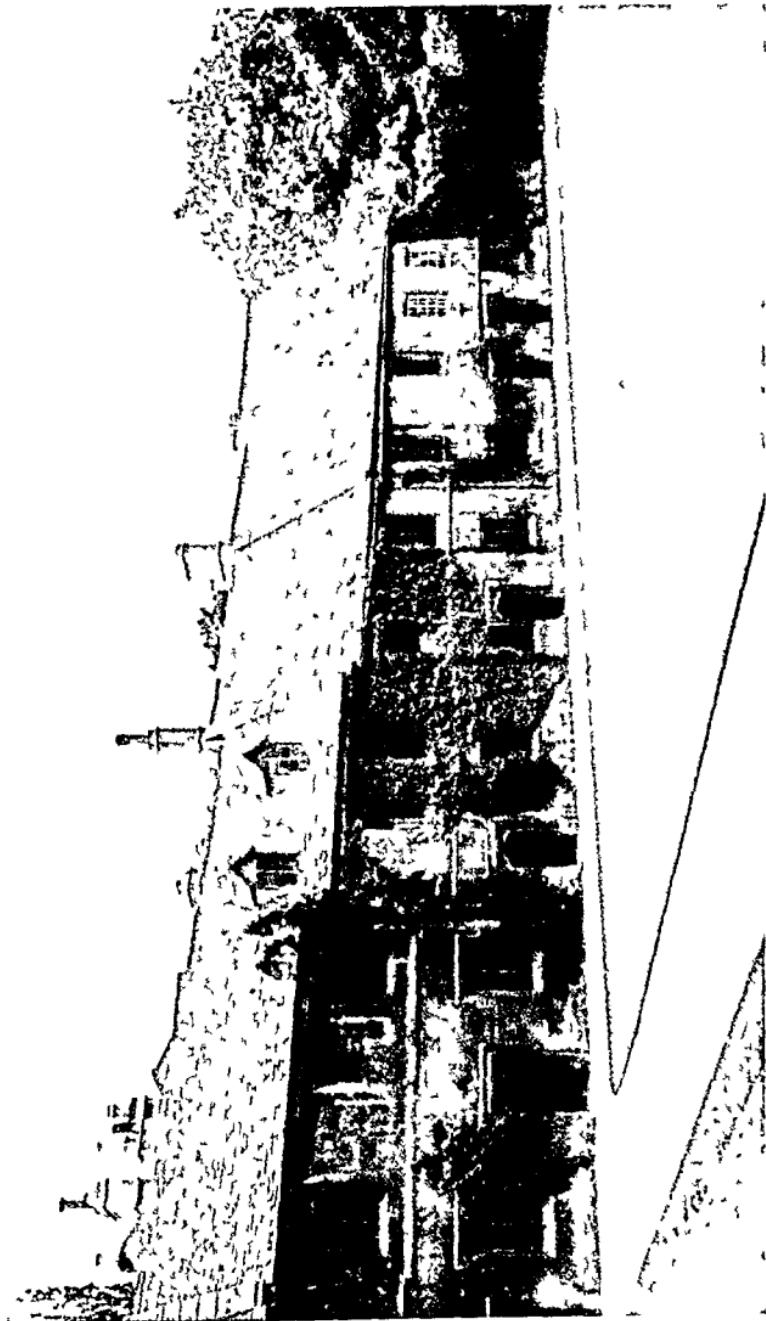
THE EARLY COLLEGES

I

THE College system probably arose from the wish to provide on a permanent basis board and lodging for needy students. As early as 1249 William of Durham, an ecclesiastic who had once been a Master in Paris, bequeathed 310 marks to support Masters of Arts studying theology, and in 1280 the University applied what remained of the money to founding University College, a little society of four Masters. But before 1280 two other Colleges had sprung into life. Some time after 1255 John Balliol, condemned to do penance for misconduct, established a small community of scholars in Oxford, which is mentioned in June 1266. And from 1262 onwards Walter de Merton, statesman and Bishop, was forming plans for the benefit of scholars, which led to the building in Oxford in 1266 and 1267 of a college better endowed and organized than anything attempted yet. Of the earliest colleges Merton was much the most important. But it seems probable that John Balliol's scholars were actually living in Oxford first.

The earliest college buildings seem to have had no definite plan. The scholars needed rooms to live in, with corners perhaps set aside for study, a hall for meals, a kitchen for cooking, a chapel for worship, when they gave up the parish church, a chest for manuscripts, out of which college libraries developed, and a safe place for documents and treasures. Other features gradually appeared. Queen's College built a gate-house like the gate-house of an Abbey. New College built a tower over its gateway, where the Head of the College could live. And the munificent founder of New College was the first to build a regular quadrangle, with a brewhouse and a bakehouse and a garden adjoining, and a bell-tower and a cloister complete.

Williams of Wykeham's spacious plans were beyond the means of the earliest colleges. But Merton had a good endow-



2 THE MEDIEVAL BENEDICTINE BUILDINGS AT WORCESTER

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History of the University

Edward II was persuaded to refound it, and almost immediately afterwards Bishop Burghersh stepped in with new statutes, intended perhaps to dissociate it from the failing fortunes of the King. The college was from the first closely connected with St. Mary's Church over the way. It acquired houses and shops close by and the old lepers' hospital of St. Bartholomew outside the town. And from its most important tenement, La Oriole, secured in 1329, it very early took its name. The Queen's College (1341) also had its early difficulties, for the plans of its founder, Robert of Eglesfield, soared far above the means at his command. But Queen Philippa's patronage brought it friends. A site north of the High Street was secured: and the Queen's influence probably helped to procure the property of God's House in Southampton, which was destined to add substantially to the wealth of the college. The medieval buildings which grew up behind the houses in the High Street had their share of interest and of grandeur, but were all swept away in a later age. Eglesfield's plan was a large one. His picturesquesque statutes were elaborate: and the ecclesiastical element in his college was unusually strong.

A smaller and a greater college complete the records of that century. The House founded for the monks of Canterbury about 1362 has now few associations for us, except that a Wycliffe was among its Wardens and that Wolsey appropriated its remains. But the new college for which William of Wykeham procured a charter in 1379 exceeded all its predecessors in the grandeur of its plan. His seventy poor and indigent scholars took possession in 1387 of a stately home. They had ample space and endowments and a great school at Winchester on which to draw. They had a fine quadrangle, a great chapel, composed of choir and transepts only, which set the fashion for most college chapels in future, a great hall beside it, towers, cloisters, garden, and the appurtenances of a great estate. William of Wykeham's scholars, after a full Arts training, were intended to study chiefly theology and law, to serve perhaps, as he had served, both Church and State.

The Early Colleges

It was the old order, strengthened by education, for which the New College in Oxford stood.

2

The numbers in the earliest colleges were small, but the collegiate system in Oxford took firm root. The statutes of Merton set the example for most colleges—those of Balliol had some features of an earlier, simpler type—and the statutes of New College, though ten times as lengthy, followed the Merton plan. The general object of college statutes was to lay down rules for a small society of Scholars or Fellows under a common Head, to regulate its administration and its property, its conduct, habits, studies. The four Masters of Arts of University College were intended to study theology and to receive for maintenance fifty shillings a year. The first members of Balliol and Exeter were undergraduate students in Arts. At Merton the majority of scholars were intended, after their Arts course, to study theology, but some 'men of humility' might study Canon Law. And the training designed for the scholars of New College was to a large extent based on the Merton ideal. Each college of course had its own characteristics. Merton soon began to train not only ecclesiastics and lawyers, but mathematicians, astronomers, and medical men. Balliol too had from early days well-known names associated with it, Dervorguilla, co-foundress with her husband John Balliol, Wycliffe, George Neville, William Gray, John Morton. University had a Master, Edmund Lacy, who was with Henry V in the Agincourt campaign. Wycliffe probably stayed in Queen's College, and both there and at Exeter and at Oriel his followers found friends. Palmer, the builder of the first college tower at Exeter, is said to have been physician to Queen Margaret of Anjou. Earlier Lancastrian Princes are associated with Queen's. Archbishop Arundel was once a commoner of Oriel, and fought with his old College. Other Archbishops, Chichele and Cranley, were among the earliest Fellows of New College: and in the fifteenth century Chaundler and

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Grocyn taught in New College the finest Latin and the earliest Greek.

In the fifteenth century the noble fashion of founding colleges continued. Lincoln, a small society of theologians established by Bishop Fleming in 1429, was practically re-founded half a century later by Rotherham, Bishop of Lincoln, afterwards Archbishop of York. Two new monastic colleges arose, St. Mary's and St. Bernard's, which vanished at the Dissolution. The one has left a gateway where Erasmus may have lingered; the other is absorbed in the old quadrangle of St. John's. But the two great colleges of this era, All Souls (1438) and Magdalen (1458), both adopted New College ideals. Archbishop Chichele, a great ecclesiastical lawyer, was minister and friend of Henry V, and All Souls with its splendid chapel was designed as a memorial of the great French War. Of its forty Fellows no less than sixteen were intended to study law. The endowments of All Souls came largely from suppressed priories. Its first little quadrangle remains, very much as it was built, upon the High Street still. William of Waynflete followed more closely Wykeham's plan. Master of Eton, Bishop, and Lord Chancellor, he won Henry VI's favour, and secured the property of the old Hospital of St. John outside the town. There he began the loveliest of Oxford colleges, and there Wolsey watched its completion after his death. Waynflete, like Wykeham, believed in education. He established a grammar school beside his college, and he provided not only for forty Fellows but for thirty younger foundationers, *demi-socii* or Demies. He appointed Readers to lecture. And he sanctioned more clearly than any predecessor the admission of commoners not on the foundation. Twenty 'sons of nobles and of worthy persons' were to be allowed to stay in Magdalen at their own expense.

THE TUDOR AGE

I

THE Renaissance and the Reformation brought great changes to Oxford. Before the fifteenth century was over Oxford scholars, Grocyn and Linacre, Latimer and Lily, were coming back from Italy, full of the New Learning and of new ideas. John Colet of Magdalen had imbibed the spirit of Savonarola and was applying it to problems of education and religion. And Erasmus, just arrived in England, was delighting in everything he found there, especially in the companionship of Colet and of Thomas More. For men of that temper the reign of the Schoolmen was over. New conceptions of knowledge and of theology had appeared. But amid all the new life of the University the old ways and the old complaints and the old disorders flourished as of yore. The Tudor Princes visited Oxford. Henry VIII's great Minister, Wolsey, never forgot his old University. He was ready to revise its statutes, to increase the Chancellor's power over the town, to support More in his defence of the new Greek learning against reactionary teachers, to recommend new teachers of his own. He set himself to build a magnificent new college. The King confiscated and finished what the Cardinal had begun. But the scale and splendour of Christ Church were worthy of its author. And for his own fine and ambitious purposes Wolsey was as willing as any iconoclast to sweep old conventional houses like St. Frideswide's or Littlemore away.

The elaborate regulations of Cardinal College, licensed in 1525, contemplated a foundation of 177 persons, with a revenue of £2,000 a year. An imposing quadrangle was laid out, a lordly kitchen and a lordly hall. But the great chapel planned was abandoned: Christ Church had to be content with the ancient Church of St. Frideswide's instead. A new college, established in 1532 on the ruin of the Cardinal's, had but a brief existence. But in 1546 Christ Church took its permanent form. An Oxford Bishopric had by then been

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founded, and endowed with the spoils of Oseney Abbey. The Dean and Canons of 1546 took over Wolsey's property and buildings. They staffed the Cathedral. They provided Professors for the University. They governed a great educational establishment of a hundred students, with chaplains, singing-men, bedesmen, and retainers, and an uncertain number of commoners as well. But Christ Church never received any statutes, and the relations of the Chapter to the College are believed to be unique. Wolsey fell, but his fall did not save the Oxford Masters from being dragged with Archbishop Warham into consultation over the King's divorce. They showed as little moral courage as their Chancellor. The divorce, which had destroyed the Cardinal, sounded the knell of the medieval Church.

Colet, More, Erasmus joined in applying the new knowledge to the problems of education, society, and religion, and Erasmus, by his fearless exposure of crabbed Scholasticism and time-honoured superstition, won the hearts of Oxford men. The spirit of the New Learning was reflected not only in the lives of these three reformers and in the schemes of Wolsey. It was no less visible in the plans of Bishop Fox. In 1517 Corpus Christi College was founded, largely to encourage the new classical training. Fox gave his twenty Scholars adequate endowments, a President, John Claymond, who was one of the first Latin scholars of his day, a small but shapely quadrangle, and a noble library, still the typical college library of the Renaissance. His statutes provided for Greek and Latin teaching with a liberality which, Erasmus predicted, would soon make the college 'one of the chief glories of Britain'. But two other college founders of those days, Bishop Smyth and Sir Richard Sutton, were more concerned to preserve the old Conservative ideals. Securing possession of Brasenose Hall, one of the oldest and most famous halls 'in the very centre of this our Athens', and of other old halls close by, they founded in 1512 a new college for the study of sophistry, logic, and philosophy as a training for theology. In 1509 they had begun the building of their

first quadrangle. Endowments for their 'Scholar-Fellows' flowed in. And before long Brasenose, like Corpus, was started on a career of prosperity with which even revolutions hardly interfered.

2

The ecclesiastical revolution was ominous for Oxford. But the University acquiesced, however uneasily, in the breach with Rome. Bishop Longland, who succeeded Warham as Chancellor, and Dr. Tresham, his representative, enforced the King's demands. Cromwell appointed Commissioners, Richard Layton and John London, to visit the University, and the Visitors showed little respect either for Schoolmen or for monks. But they made some provision for new teaching in Greek and Latin, in Medicine and in Civil Law. College funds and public funds were beginning to contribute to the cost of education. The colleges had grave fears about their property, and for monastic property the worst fate was in store. St. Frideswide's and Littlemore had already gone to endow Cardinal College. Abingdon with its ancient wealth, Oseney and Rewley amid the 'chinking rivulets' beyond the Castle, Eynsham and Godstow on the upper reaches of the river, were marked for spoliation with the rest. The Oxford colleges which depended upon Gloucester, Durham, Canterbury, fell with the great Houses which maintained them. All monastic colleges and settlements of Friars were seized on. Franciscans and Dominicans, Carmelites and Augustinians, shared the common doom.

In the vicissitudes which followed the University played a reluctant part. It submitted to Cromwell's visitation, to Cranmer's injunctions, to Somerset's demands. Dudley headed a new Commission which imposed some startling changes. The Protestant Reformers triumphed, Dean Cox of Christ Church and his friends. Emblems of 'superstition' suffered, statues, painted windows, manuscripts, and missals. When the tide turned, the University submitted, perhaps with more relish, to Bishop Gardiner and Cardinal Pole.

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Some Reformers fled and some were captured. Ridley and Latimer were burned in 1555 'in the Towne Ditch, over against Baliell Colledge'. Cranmer quickly followed them to the stake. But Cardinal Pole's Injunctions left no lasting mark. He died within a few hours of his mistress, and Elizabeth's first Parliament repealed the Marian laws.

One visible result of the Reformation in Oxford was the establishment of new colleges in the old buildings of the monks. Durham College came into the hands of Sir Thomas Pope, a successful Tudor politician, who had built up a great fortune in the changes of the times. Gloucester College and St. Bernard's came ultimately into the hands of Sir Thomas White, a wealthy merchant of Queen Mary's day. Another college, Wadham, was established later in the old quarters of the Austin Friars. Pope secured property enough to found Trinity College—a President, twelve Fellows, and eight Scholars—in 1555. He took over the Durham monks' buildings. He followed the old religion: his Fellows were intended for the Church: and his statutes generally followed the old lines. But commoners were to be admitted to Trinity, and the provision for education was unusually complete. Sir Thomas White, already a liberal patron of the Merchant Taylors' School in London, founded St. John Baptist's College in the grounds and buildings of St. Bernard's College in the same year. Early statutes contemplated as many as fifty Fellows and Scholars: but these numbers were more than the early endowments could support. White, too, took over the monkish buildings. He, too, provided carefully for lectures and for education, though he had no more liking than Pope for the Reformed religion. And he established scholarships for boys from Merchant Taylors' School. Both the new colleges lived through the difficult days of revolution, and prospered steadily as years went on.

were replaced. But the Visitors of 1559 acted with caution, and the number of Fellows ejected at first was probably not large. A little later Bishop Horne, as Visitor of more than one college, insisted on changes which Romanists could not accept. But there was some inclination to compromise or temporize, while some of the dissidents withdrew to Gloucester Hall or elsewhere. At certain colleges there were sharp controversies. Dean Sampson at Christ Church and President Humfrey at Magdalen proved to be resolute Puritans. President Cole, recommended by the Queen to Corpus, brought back from Zurich Calvinistic views. The splendid Leicester, appointed Chancellor in 1564, encouraged the Reformed party. But the ordinary life of the University went on with little change. Town and Gown still quarrelled. Tradesmen and servants continued to claim the privileges of clerks. Disease worked ravages: there was a 'violent Plague' in 1571, and a worse epidemic in 1577. But when Elizabeth, still young, handsome, gracious, visited the University in 1566, and spent six days receiving homage, hearing disputations, seeing plays, she was welcomed with a passionate loyalty the meaning of which no one could mistake.

Leicester was an active Chancellor. He may, like his Royal Mistress, sometimes have pressed his interference or his patronage too far. But he pointed out freely University failings, the want of discipline, the neglect of lectures, the tippling, dicing, card-playing, the growing extravagance in dress. No man was a better authority on that point. He did something also to bring the statutes into order and to enforce new rules of discipline and study. The Matriculation Statute of 1565 established a Register: all scholars had to be thenceforward under a master or tutor in some college or hall. In 1581 a new Statute of Matriculation required subscription to the Thirty-nine Articles and to the Queen's Supremacy. The policy of forcing students into colleges prevailed, though one or two privileged tutors were allowed to take pupils into their houses. Of the old halls only eight—Broadgates and Hart Hall, St. Alban's, St. Mary's and St. Edmund's,

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Magdalen Hall, Gloucester Hall, and New Inn Hall—survived. At certain colleges commoners rapidly increased. About 1570 the University may have contained some 1,700 members, and, no doubt, it enlarged its borders as the old century ended and the new century began.

The government of the University developed, but much on the old lines. Dispensations for avoiding the strict fulfilment of old rules probably increased. Both Universities were incorporated by Act of Parliament in 1571. Committees were set up and new rules framed to deal with points of difficulty, to regulate graces and sermons, disputations and fees. The Registers of the Chancellor's Court and the Registers of Congregation and of Convocation were better kept: for the Great Congregation of Regents and Non-Regents the term Convocation now came into use. Socially the standards of comfort improved; luxury, it was alleged, crept in. Undergraduates, still often very young, were generally well-to-do. Vanity in dress increased. University dramas roused interest: they were played before Queen Elizabeth and King James and King Charles. But if *Hamlet* was acted in early seventeenth-century Oxford, it was not with the University's assent. In the Schools the old traditions held, though not unchallenged. Aristotle still claimed supremacy. Ptolemy counted for more than Copernicus, Strabo and Pliny for more than Columbus. Even the Calvinists could not shake off the influence of the Schoolmen. Francis Bacon, a Cambridge man, found that our University's theological contentions violated 'truth, sobriety, or peace'.

When Elizabeth paid her second visit to Oxford in 1592, the new order had triumphed. But the religious struggle had left its mark. William Allen of Oriel had founded a Jesuit College at Douai, and Oxford men had incurred martyrdom for Jesuit ideals. Puritan influence was strong, not only at Christ Church and Magdalen, but at Balliol and Exeter, at Queen's and Corpus and elsewhere. Merton was ruled by Sir Henry Savile, famous alike as scholar and as courtier, All Souls by Robert Hovenden, one of its wisest Heads.

The Tudor Age

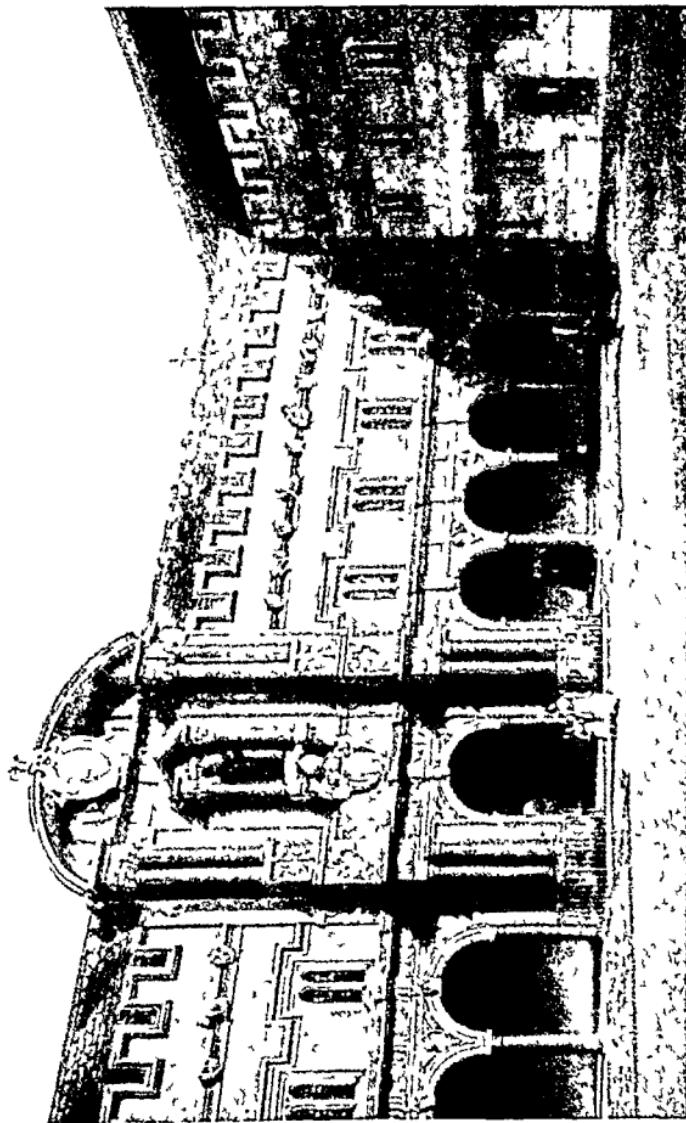
Tobie Matthew, President of St. John's at twenty-six and Dean of Christ Church at thirty, had passed on to an Arch-bishopric. 'W. Rawley' had been an undergraduate at Oriel, Philip Sidney at Broadgates Hall. Laud was already a scholar of St. John's. A third Tudor college had been established, Jesus College, in 1571. Elizabeth called herself its Founder; but Dr. Price found the funds to start it, and after a struggle Welsh patriotism and Welsh generosity did the rest. One other foundation of Elizabethan Oxford, the greatest of all University possessions, was still in the future when Elizabeth bade farewell for the second time to the Masters on Shotover Hill. But in 1598 Sir Thomas Bodley offered to restore the Library which Duke Humphrey had made famous, and which a later generation had neglected and dispersed. Bodley, brought up at Geneva and at Magdalen, and trained in the tangled diplomacy of Elizabethan days, had a 'great store of honourable friends'. He called upon them all to help him, and in the early seventeenth century he secured a wonderful response. By the end of 1602 he had collected over 2,000 volumes. When the great Queen died the new Library had been established in the building which bears Bodley's name.

STUART AND JACOBITE OXFORD

I

If Elizabeth took Oxford to her heart, Charles I made it his capital in his day of trial. And the University was conspicuous in the struggle between Puritan and Whig ideals, on the one hand, and the political and ecclesiastical theories of the Stuart Princes, on the other. While Bodley laboured at his splendid Library, induced King James to visit it, and led on the University to plan a noble building, with Library, new Schools, and new Convocation House complete, theological controversy was rife in Oxford. Two new colleges came into being. Nicholas Wadham and his wife secured for their plans the site of the old Augustinian Convent just outside Smith Gate, and in 1610 one of the most perfect of Oxford quadrangles began to appear. It was intended especially for West Country scholars. Robert Blake was one of its early members; Raleigh's son and Monk's brother carried on the tradition. In 1624 it was decided to convert Broadgates Hall into Pembroke College, and moneys left by Thomas Tesdale and Richard Wightwicke were converted to that use. Tesdale had intended his money chiefly for scholars in Balliol College. New professorships also were founded, by Savile for Geometry and Astronomy, by other benefactors for Philosophy, History, and Music. Anatomy received some recognition. A Physic Garden was started. Science began to stir. But ecclesiastical contentions absorbed University leaders, and at Oxford, as in Court circles, High Churchmanship gained ground.

It is true that in early seventeenth-century Oxford Puritan feeling was still vigorous. Men like George Abbot, Master of University College and afterwards Primate, Robert Abbot of Balliol, his brother, John Prideaux, Rector of Exeter, and John Wilkinson at Magdalen Hall, defended Protestant opinions stoutly and gathered Puritan students round them. But fashion was turning against the Calvinists. William Laud



3. THE INNER QUADRANGLE, ST. JOHN'S COLLEGE, ADDED BY
ARCHBISHOP LAUD

From the UNIVERSITY ALMANACK for 1845

while at St. John's made himself a force in Oxford. As Bishop and Archbishop he became a power at Court. And when in 1630 he succeeded Lord Pembroke as Chancellor, his strong sense of authority and discipline was soon felt in University life. Laud loved Oxford and was bent upon reform. His Statutes, drafted by Brian Twyne, the University's historian and the first Keeper of its Archives, gave fresh life to the old regulations and reviewed the whole system of government and study. Democratic traditions were declining. The Heads of Houses had secured in the Hebdomadal Council the chief control of academic business. Educational changes could not be resisted. But the Laudian Code claimed to have departed no further from the ancient statutes than necessity or the genius of the age required. When King Charles visited the University in 1636, and was splendidly entertained by the Chancellor in the beautiful buildings which, with John Jackson's help, he had just added to his old college, Laud's authority stood at its zenith. But the movement against it in Church and State was already gathering formidable force.

Laud fell. But in the University his Code survived. The Civil War broke out. King Charles brought his army to Oxford and kept at Christ Church his uneasy Court. His Ministers, notably Edward Hyde, found lodgings in the colleges. His courtiers made free with buttery and cellar. His treasury called for the college plate. His troops jangled through the quadrangles, and he watched their movements from Magdalen Tower. Undergraduates enlisted and dug on the fortifications. Lectures flagged and students fell away. Few men liked the 'war without an enemy'. But Chillingworth and Falkland pleaded in vain for tolerance and peace. With the King's flight from Oxford in April 1646 the Royal cause went down. Cromwell visited the University in his hour of triumph. He was elected Chancellor. Puritan Commissioners reorganized Oxford, purged the colleges of obstinate 'Malignants', appointed new Professors and new Fellows in the place of men devoted to the cause of the King.

All but three colleges were given new Heads. Dean Samuel Fell at Christ Church and Gilbert Sheldon, the Warden of All Souls, were only two of the representative Royalists displaced. Large changes were made; but the numbers expelled have been overstated; and it is evident that moderating influences were not unknown upon the winning side. Differences between Presbyterians and Independents added to the difficulty of the problem. Some resented the new college regulations; some scoffed at the new discipline and the 'godly' ways. But Puritan rulers like John Owen at Christ Church, John Conant at Exeter, John Wilkins at Wadham, were men who would have brought credit to any university, and under their administration numbers increased and prosperity returned. Wilkins gathered round him in Oxford a remarkable group of scientific men, the precursors of the Royal Society: Thomas Sydenham, a great name in English medicine, Jonathan Goddard, once physician in Cromwell's armies and afterwards Warden of Merton, Seth Ward and John Wallis, Savilian Professors—Wallis proved in controversy more than a match for Hobbes—William Petty, in 1651 Vice-Principal at Brasenose, Robert Boyle, John Locke, and Christopher Wren. When Monk brought back the King, and Edward Hyde, Lord Clarendon, returned to rule as Chancellor, the Cavaliers regained their old ascendancy, but the standards of conduct soon proved to be relaxed.

2

Clarendon's memory lingers in Oxford still. But, for all his love of the place and his real interest in education, he was never at home with the new generation, and he could not guide the reaction which carried him along. At first there was some wish to compromise, and trimmers found their opportunity. The Presbyterians had helped the King's return, and several Heads of Colleges recently appointed were allowed to remain. But Parliament demanded the restoration of the old Royalist Heads and Canons and Fellows. And as the reaction gathered force, the Act of Uniformity followed,

and other Heads and Fellows found themselves unable to stay on. The new King visited Christ Church in 1663 and brought his Court to Oxford two years later to escape the Plague. He was to return there in a day of trouble, to secure the greatest political triumph of his reign. But Clarendon soon ceased to govern Charles's counsels, and in 1667, bidding farewell to Oxford and to England, he withdrew to France to write his famous *History*. Its profits paid for building the Clarendon Printing House. Archbishop Sheldon, who had passed on very quickly from All Souls to greater things, had little time for the duties of Chancellor, and he transmitted the office to the Duke of Ormonde at an early date. But he at least founded, and called in Christopher Wren to build for him, the University Theatre which bears his name.

The most conspicuous of the returned Royalists was the famous Dean, John Fell. Son of Dean Samuel Fell, he had been a Christ Church student at eleven and an Ensign in the Royal army later. As Head of his old college he proved a vigorous and high-minded man. Vice-Chancellor in 1666, Bishop of Oxford, as well as Dean of Christ Church, in 1675, Fell was a fine type of Churchman and Cavalier. He completed the college buildings, and crowned Tom Quad with Wren's tower. He entertained both Charles and James. He expelled John Locke. He refused to honour Titus Oates. And he patronized with kindness, but not without offence, a genius hardly less representative of seventeenth-century Oxford, the untiring student, annalist, antiquary, and back-biter, Anthony Wood. Wood's failings did not prevent his *History* from being a memorable book. And his picture of the demoralization which accompanied the anti-Puritan reaction stands, though there were men of force and character besides John Fell in the Oxford of that day. President Bathurst of Trinity, for one, had a great reputation among the Tory gentry, though he helped to train John Somers, a future leader of the Whigs. On the other hand, Heads like Clayton at Merton, and Finch, nominated by James II to All Souls, reflected too clearly the spirit of the age. Bathurst

had been among the early men of science, and he lived to see the opening of the Ashmolean Museum in 1683. It was built to house the collections made by John Tradescant and Elias Ashmole: but in the building of it Wren had no share.

Charles II chose Oxford in the crisis of his reign as the stage on which to play out his struggle with his Parliament: and the famous scene in the Schools in 1681, which destroyed the schemes of Shaftesbury and Monmouth, appeared at the time to have ruined the Whigs. But James II had a gift for playing into the hands of his opponents; and he, too, chose Oxford as the scene of a political experiment, the last attempt of an English Sovereign to over-ride the law. James's endeavour to Romanize the University, the opening of Romanist chapels by two subservient Heads of Colleges, and the famous resistance of the Magdalen dons, are a part of English history. Only the gravest mismanagement could have made Oxford Tories welcome William of Orange. And there is no doubt that they turned with relief and devotion to Queen Anne. Deans like Aldrich, Atterbury, and Smalridge were more representative of Christ Church opinion than John Locke. Anne, the special friend of the Church, was received with enthusiasm in Oxford: and in 1710 the rally of Tory Churchmen converted Dr. Sacheverell of Magdalen into a national hero and nearly swept the Act of Settlement away. The project failed. The Hanoverian kings succeeded. But it was in a world of apprehensive Whigs and angry, disappointed Jacobites that the undergraduates of Oxford grew up under George I.

3

Another diarist, bitterer than Wood, has left us a gloomy picture of early Hanoverian Oxford. But Thomas Hearne discredited every man with whom he quarrelled, and could never be fair to any 'rank stinking Whigg'. College Heads were sometimes undoubtedly inadequate, neglectful of business, and fond of the bottle—though there were not wanting men of a better type. Enthusiasm for study, if not unknown,

was rare: enthusiasm of all kinds, except for violent politics, was out of fashion. There were bickerings in several colleges, contested elections, personalities, litigation, nepotism, jobs. Party feeling ran high. Whigs gathered in a few colleges, like Merton and Wadham, Exeter and Oriel. But the general tone was strongly Tory, and Dr. Shippen at Brasenose and Dr. King at St. Mary Hall were notorious Jacobite Heads. From time to time, almost till George III succeeded, outbreaks of Jacobite feeling revived the old disorders. Privilege and luxury tended to encroach. Servitors still got a cheap education. But Gentlemen Commoners were increasing notably, and not at Christ Church alone. William Pitt at Trinity in 1727 found a Gentleman Commoner's expenses higher than his father liked. Meanwhile the tutorial system and the teaching given in colleges gained ground, though educational progress languished. Science was backward and the Laudian system out of date. Professors rarely lectured: but the two Wartons kept up the reputation of the Professoriate. One sardonic Whig critic wrote of debauchees professing moral philosophy and of teachers of astronomy who never looked soberly upon the stars. Joseph Butler found Oxford studies frivolous and tiresome; and Gibbon and Bentham forty and fifty years later had no more mercy on the system than he. But there were still brilliant men in each generation. Addison held his Fellowship at Magdalen till 1711. William Murray of Christ Church began over a Latin poem his lifelong rivalry with William Pitt. Samuel Johnson brought to Pembroke in 1728 his fierce, unruly independence. Blackstone, also from Pembroke, became one of the glories of All Souls. Adam Smith went to Balliol in 1740. Charles Fox was a Gentleman Commoner of Hertford in 1764. And the two Scotts in the same age added legal lustre to University College.

The eighteenth century saw new colleges and new buildings. Great architects like Wren and Hawksmoor replaced the older master-builders. Wren is responsible for the Sheldonian Theatre, for the Bell Tower at Christ Church, for the north block in the garden quadrangle at Trinity, and for

some work and advice elsewhere. He also planned, it seems, new chapels for Trinity and Queen's. But to Hawksmoor belongs the chief credit for the new Queen's College, for the Clarendon Building, and for the remarkable back quadrangle at All Souls. Hawksmoor shared in many other plans, though Gibbs's design for the Radcliffe Camera was preferred to his. And he propounded some audacious schemes for rebuilding Brasenose, Christ Church, and Magdalen wholesale. Meanwhile many colleges added to their buildings, and amateur architects like Dean Aldrich and George Clarke of All Souls, politician and virtuoso, helped. Clarke was largely concerned, with the eccentric Dr. Woodroffe and the Worcestershire baronet Sir George Cookes, in the curious vicissitudes which ended in the foundation of Worcester College, on the site where once the Gloucester monks had dwelt. Some years later, in 1739, the vigorous Dr. Newton succeeded in converting Hart Hall for a period at any rate into Hertford College.

Two figures of outstanding influence have their place in these Oxford generations. John Wesley, brought up on argument and piety, entered Christ Church in 1720. But it was at Lincoln as Fellow and Tutor that he quietly launched his crusade, began to teach his godly and exacting discipline to a world 'dead in trespasses and sin'. Yet the Oxford Methodists were never numerous. Forty years saw them driven out of the University by men to whom enthusiasm even in righteousness was past understanding. Even Samuel Johnson thought their expulsion just. To eighteenth-century Oxford his strong common-sense was more acceptable. The 'mad and violent' undergraduate of Pembroke had developed thirty years later into a leader of contemporary thought. He would come and stay at Oxford, from 1754 onwards, and bring dons and undergraduates alike under his spell. He would dominate the Common Rooms, at University especially, with his far-ranging, racy, overbearing conversation. And if pedantry and dogmatism sometimes mingled with it, he yet, like Wesley, lifted the standards of his age.

MODERN OXFORD

I

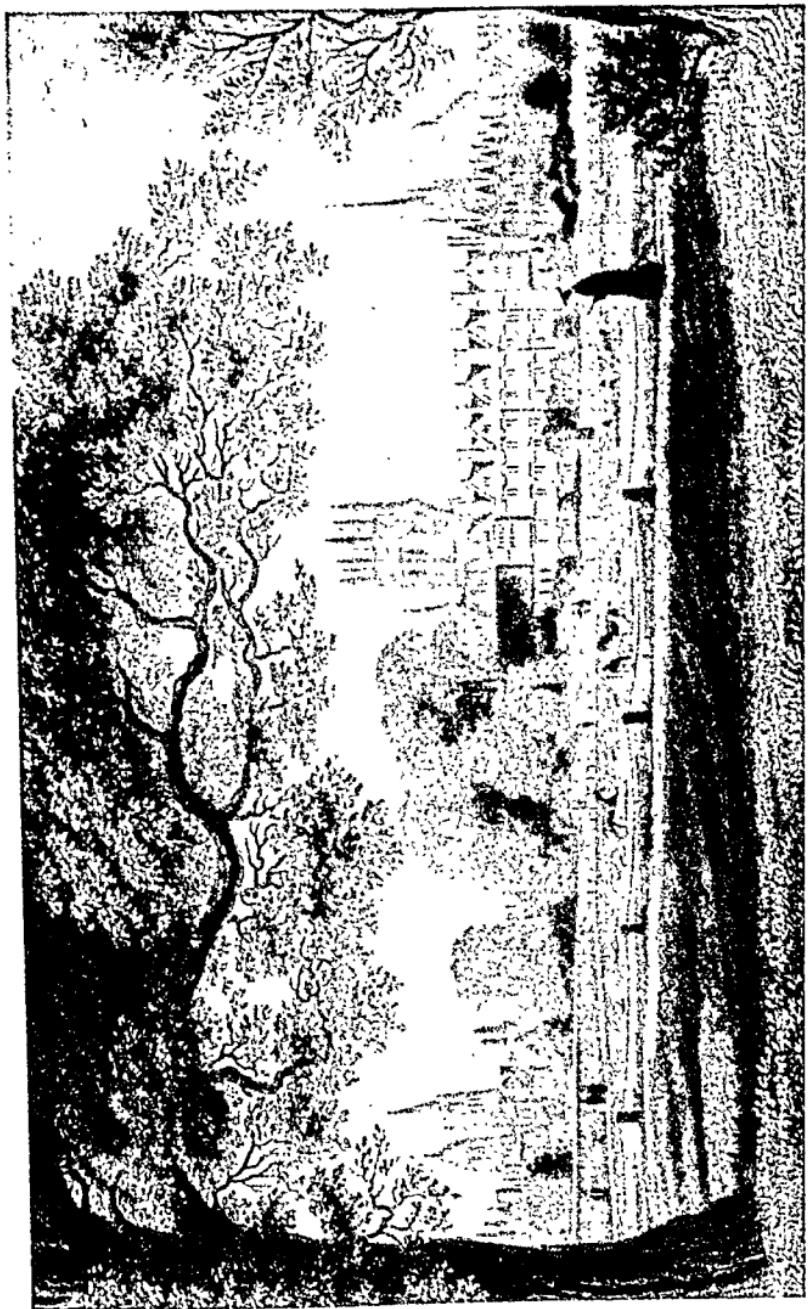
REFORM at Oxford, long delayed and greatly needed, began before the eighteenth century closed. The Laudian Statutes, with their rules of government and discipline, their provision for lectures, disputations, studies, still dominated University life. But the right to alter and amend them was admitted after a struggle in 1760. Convocation (*Magna Congregatio*) was defined afresh. And Oxford men were reminded of the futility of the old exercises and of the somnolence into which the University had fallen. Insistent voices demanded improvement. Some active-minded tutors urged the need of real examinations: and three notable Heads of Colleges, John Eveleigh, Provost of Oriel in 1781, Cyril Jackson, Dean of Christ Church in 1783, and John Parsons, Master of Balliol in 1798, threw themselves into the movement for reform. In the year 1800 a New Examination Statute established both a Pass and an Honours Examination: and in the years which followed the system of classes and other modifications were introduced. Cyril Jackson became a great figure in Oxford, and Christ Church, already full of budding statesmen, more than ever a great college. The buildings were crammed from garret to cellar—not a dog-kennel untenanted, said De Quincey. Jackson was credited with ‘a wonderful tact in managing that most unmanageable class of Undergraduates, Noblemen’. Gold tassels multiplied. The Dean enforced discipline and stimulated work. He strongly urged the reading of Homer. He chose excellent tutors. He welcomed George Canning, and is supposed to have checked his inclination for the company of mischievous young Whigs. He advised Robert Peel to work like a tiger, and watched over him with affectionate pride. Canning would gladly have represented the University in Parliament. But Oxford would tolerate no friend of Catholic Emancipation. That honour was reserved for Peel, until the University rejected him for

History of the University

the same reason, as later on it chose and then rejected Gladstone. Peel's examination in classics in 1808 was a popular triumph. A double first followed and in six months he was in the House of Commons.

Other colleges too had woken up. Theophilus Leigh, for nearly sixty years Master of Balliol, survived till 1785, and under him the numbers in the college fell from 192 to 75. But Dr. Parsons, a Tory reformer, and for long 'the working man in the Hebdomadal Board', brought new life and new ideas. Southey's career at Balliol ended rather suddenly, but William Hamilton and his Scottish friends set a new standard for the future. At Oriel Eveleigh was succeeded in 1795 by Copleston, a memorable Provost, and the college, throwing open its Fellowships, entered on the most brilliant period of its history. The demand for the removal of religious tests gained force. Lord North, as Chancellor, deprecated the raising of the question. And Convocation steadily insisted that religious tests were needed 'to secure the venerable Fabric of our Constitution in Church and State'. In politics Dr. Tatham, a typical Tory Head at Lincoln, reminded Burke in 1791 that Aristotle had founded his philosophy on 'the natural inequality and subordination of man'. And even young Landor at Trinity and young Shelley at University failed to persuade their contemporaries to embrace freely the revolutionary opinions of the time. When W. E. Gladstone in 1828 followed Canning and Peel to Christ Church, neither University nor city was in essentials greatly altered from the Oxford of the past. Lord Grenville was still Chancellor. Dr. Routh, a tutor of Johnson's day, had ruled for thirty-seven years at Magdalen, and was to rule there for twenty-six more. Dr. Blackstone had been for thirty years Principal of New Inn Hall and was alleged to be its only member. Privilege and tradition lingered on. But there was already a new stir and movement. The reforming spirit could not be silenced. Even science had begun to count.

The years which separate Mr. Gladstone's admission at Christ Church from his election as Member for the Univer-



4. OXFORD A CENTURY AGO, FROM MERTON FIELD

On the left, Tom Tower and the Cathedral, in the centre, Merton, and to the right St. Mary's and the Radcliffe Camera

From Ingram's MEMORIALS

sity in 1847 saw the rise and fall of the Oxford Movement which will always be associated with Dr. Newman's name. But among Oxford men of that day the strong revival of religious feeling was not confined to one school of thought. It was hardly less marked than the strong interest taken in politics and in Parliamentary Reform. In 1811 Thomas Arnold became a Scholar of Corpus, and John Keble and Richard Whately Fellows of Oriel. J. H. Newman gained an Oriel Fellowship in 1822, E. B. Pusey in 1823, Hurrell Froude and Robert Wilberforce in 1826: and in 1828 Edward Hawkins was elected Provost. Henry Manning went up to Balliol in 1827; Archibald Tait, Arthur Stanley, and Benjamin Jowett won Balliol Scholarships in 1830, 1833, and 1835. In 1828 Newman began the famous sermons at St. Mary's, which with their nobility of spirit touched the hearts of many who could not accept their dogmatic appeal. But it was not till Keble preached his stirring sermon on National Apostasy in 1833 that the new crusade began. Mr. Gladstone's immediate contemporaries were a good deal occupied with politics. The Union Society, replacing an earlier Debating Society at Christ Church, was established at Wyatt's in the High Street in 1829; and among the famous speeches delivered there undergraduates long remembered young Gladstone's impeachment of Lord Grey's Government in May 1831.

Catholic Emancipation and Parliamentary Reform were carried; but still the University survived. The Duke of Wellington was elected Chancellor, and accompanied Queen Adelaide to Oxford in 1835. By that time the Tractarian Movement was in full swing. Newman's early Tracts had proved a battle-cry. The peril to the Church, the evils of 'a shallow and detestable liberalism', the meaning of Catholic tradition, the authority and apostolical succession of bishops, were themes which roused and startled opinion. In 1841 the attempt to interpret the Thirty-nine Articles 'according to the sense of the Catholic Church' deepened the sensation which the earlier Tracts had created. From 1833 to 1845

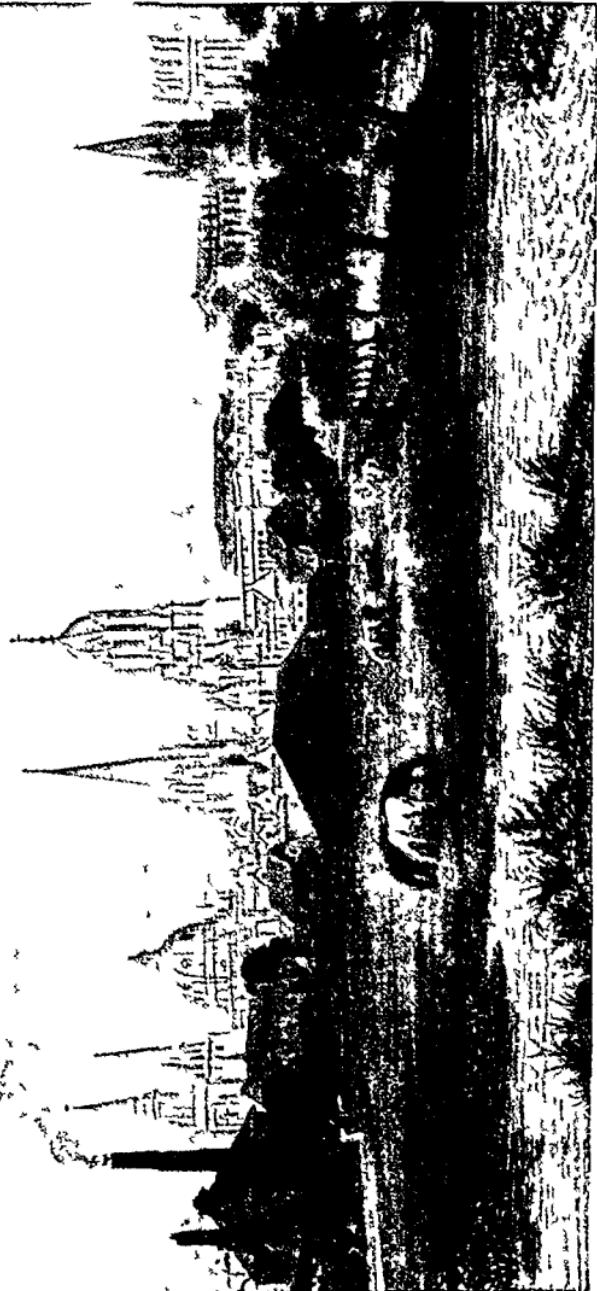
History of the University

that memorable controversy divided and engrossed the University. On the feelings and differences excited it is not necessary to dwell here. When the crisis came in 1845, many disciples of the Oxford Movement, men of character and devotion, took their stand beside Keble and Pusey. Others, not less sincere and distinguished, passed with Newman into the Church of Rome.

2

The Tractarian Movement was followed by a Liberal reaction. The first University Commission was appointed in 1850, and immediately began its inquiry into the possibilities of University reform. But Convocation had of late done much to reorganize studies; new Schools in natural science, law, and history were being set up; and many Oxford men resented interference from outside. Some colleges declined to help the Commissioners' inquiries, and in regard to college revenues little information was forthcoming. The Commissioners, however, had no difficulty in discovering that the Hebdomadal Board was unpopular, and that Congregation was reduced to a shadow of its former self. In their Report they advocated large reforms. They aimed at diminishing the monopoly enjoyed by the Heads of Houses, at restoring the life of Congregation, at modifying the regulations for Proctors, at reforming the Vice-Chancellor's Court, at abolishing privileges for men of rank—Gentlemen Commoners and servitors alike must go—at improving discipline and lowering expenditure, at widening and improving the whole system of study. They proposed to make the Professors take a far more active share in the work of education. They called on the colleges to throw open their Fellowships and Scholarships, to reorganize their finances, and to contribute substantially to the University's support. They were prepared to break through medieval statutes, to put an end to apathy and old abuses, and even to surrender clerical control.

There was a sharp fight over the Commission's Report. But the Act of 1854, carried mainly by the efforts of Mr.



5 OXFORD A CENTURY AGO, FROM THE SOUTH-WEST
The most prominent towers, from left to right, are those of All Saints' Church, St Aldeate's Church, the Radcliffe Camera, St Mary's, Tom Tower, the Cathedral, and Merton

From Ingram's MEMORIALS

Gladstone, embodied much of its spirit and advice. The government of the University was reconstituted. A Hebdomadal Council replaced the Hebdomadal Board. A new Congregation, of resident members of Convocation, was created. An Executive Commission was empowered to alter trusts and statutes, to apportion revenues, to issue ordinances for college reform; and under this pressure a series of comprehensive changes quietly but steadily revolutionized Oxford life. The government both of the University and of the colleges became really representative. New vigour was infused into teaching and administration. The Professorial system was reorganized and partly endowed from college funds. Fellowships and Scholarships were made to depend more upon merit and less upon local, personal, or ecclesiastical considerations. Vested interests and indefensible restrictions had to give way to the common good.

The Act of 1854 was followed by other important changes. In 1871 Parliament after a long struggle abolished University Tests, and Oxford ceased to be the preserve of the Church of England. In 1872 a new Commission was appointed, and proceeded to inquire into the finances of University and colleges alike. And in 1877 yet another Commission was set up, determined to utilize college revenues more freely for University education. This Commission sat for some years and carried through a comprehensive programme of reform. It organized studies afresh. It changed the conditions of Fellowships. It demanded work in return for endowments. It fearlessly remodelled college statutes; the old rule of celibacy was at last relaxed. It made further large provision for Professorships, for lectures, and for poor students. The work of the earlier Commissions was carried forward and Oxford gradually accepted the new ways.

These changes were accompanied by great developments in the teaching of modern subjects. Earlier in the century Dr. Kidd, Dr. Daubeny, and Dr. Buckland had made the voice of science heard. And from 1845 onwards, under Dr. Acland's leadership, the demand for a Science Museum

History of the University

gathered round it all who wished to see clerical Oxford open her gates to the new ideas. It gathered round it other enthusiasts too. John Ruskin, Gentleman Commoner of Christ Church in 1837, Professor of Fine Art in 1870 and again in 1883—the diggers of Hinksey date from 1874—contributed to the project his rare gifts of sympathy and inspiration. And the Museum, founded in 1855, represented in many different ways the dreams of its builders. The same ardent and romantic spirit produced the frescoes in the Union Debating Hall, painted by William Morris, Burne-Jones, and others in their resolve to beautify the world. In 1859 the Prince of Wales came up to Oxford, and in the same year the old sermons for Charles I's Martyrdom and Charles II's Restoration ceased. In 1860 Bishop Wilberforce, challenging the ideas of Darwin at a meeting of the British Association, found himself fearlessly answered by Professor Huxley; and though Disraeli at the Sheldonian professed himself on the side of the angels, the new views and the new voices would not be suppressed. The Tractarian Movement had roused apprehensions about authority and superstition; and three Balliol men, Stanley, Jowett, and Temple, were prominent in demanding freedom for liberal views. Mark Pattison and James Anthony Froude, Clough, Matthew Arnold, and many others were counted on their side. In 1860 the writers in *Essays and Reviews* claimed the right 'to say what we think freely within the limits of the Church of England'. Severe attacks upon them followed, and Jowett, treated with little liberality by some of his opponents, became a protagonist in the struggle which ensued.

3

Jowett filled a large place in Victorian Oxford. He had a great reputation as a tutor, and as Master he gathered other famous tutors round him. Balliol proved a training-ground for judges and prelates, ambassadors and statesmen. In the ten years following 1870 men noted Asquith and Milner, Curzon and Grey. At Christ Church Dean Liddell in the

same age carried on a fine tradition. He did more to improve the Cathedral and the college buildings than any Dean for many years. Meanwhile New College and Magdalen developed from small and privileged societies into great popular colleges. University, Trinity, and Corpus prospered and made way. Many colleges added, more or less happily, to the buildings of the past. Wyatt's architectural methods found successors in those of Butterfield and Waterhouse and Gilbert Scott. Balliol was largely rebuilt, Exeter transformed, and Merton threatened. But Sir Thomas Jackson, Mr. Bodley, and others showed a finer taste. New Schools of some splendour rose in the High Street, and the Bodleian, steadily expanding, took possession of the older Schools of Jacobean days. The Press was already flourishing in a new home. Trinity and Brasenose built new quadrangles. New colleges appeared—Keble, founded in 1868 to preserve the memories of the Tractarian Movement, and Hertford, re-established by Mr. Thomas Baring about 1874. The old halls, doomed by University Commissions, were absorbed in the colleges, all but St. Edmund Hall, which showed such vitality that by common consent it was allowed to survive. Some Private Halls sprang up later. Nonconformist colleges for graduates were started, Mansfield, the comeliest, in 1885. Later buildings have since added to the resources of both University and colleges, while a far-sighted policy has secured lands in the immediate neighbourhood for the Oxford Preservation Trust.

Two interesting modern developments are separately treated in this volume. The movement for the higher education of women, which was to end in their admission to full membership of the University, led to the foundation, in 1879, of two women's colleges in Oxford, Somerville and Lady Margaret Hall. They and their successors have since grown remarkably in popularity and strength. And the large-minded bequest of Cecil Rhodes of Oriel, for the training at Oxford of Scholars chosen from the British Empire, Germany, and the United States, brought a new element into University life. The athletic prowess of the Rhodes Scholars

History of the University

added to their popularity. All through the nineteenth century athleticism had been growing in repute. Eight-oared racing at Oxford began with a contest between Brasenose and Jesus in 1815. The University Boat Race was first rowed in 1829, and became an annual institution in 1856. The first Oxford and Cambridge cricket-match was played in 1827. Football, a temptation to medieval clerks, was raised to the dignity of a University contest in 1873. Contests in racquets and tennis were older. Hunting was always a rich man's recreation and walking the resource of the poor. Other fashions grew up. Music steadily asserted its influence: the Holywell Music Room had been opened as early as 1748. Art found many votaries. Aestheticism offered some absurdities. Debating and discussion were always in the blood. The older philosophies found fresh rivals or exponents, Comte and Mill and T. H. Green. Social reform roused enthusiasm. University Settlements were founded. University Extension carried University teaching successfully into populous towns. Ruskin College and the Workers' Educational Association arose to meet the needs of working-men. New studies, English Literature, Modern Languages, History, Geography, Forestry, Engineering, won popularity beside the old. The Modern History School under a succession of great historians attracted many students. The Taylor Institution, a name not to be forgotten, proved a valuable centre for the study of modern languages and the University Galleries for the study of art.

The end of the nineteenth century saw some illustrious figures passing away. The Boer War called Oxford men to the colours. Queen Victoria died, and a great era ended: her great-grandson presently became a Magdalen man. The Prince of Wales lived an undergraduate's life and won in rich measure undergraduate affection. Lord Curzon, succeeding in 1907 to a long line of distinguished Chancellors, threw himself with energy into new schemes of reform. He even suggested, in advance of University opinion, degrees for women and the abolition of compulsory Greek. But in 1914

Modern Oxford

the Great War emptied Oxford. 14,500 members of the University enlisted. Every college had its tale of honour and of loss. Oxford came through the crisis undaunted, bore steadily even the financial strain. But, as the numbers filled up again to overflowing, new problems had to be faced and solved. The colleges were overcrowded, but the cost of college life had inevitably gone up. In 1922 a new Commission proposed large developments in teaching, staff, and buildings, and recommended that a large annual grant should be made to the University by the State. The demand was liberally met. The University may hope to provide for the needs of the new generations at least as generously and wisely as of yore.

WOMEN'S EDUCATION AT OXFORD

By MISS L. GRIER

THE earliest discernible movement for the higher education of women in Oxford was in 1866, when certain wives and sisters of Oxford professors and lecturers obtained permission to attend some of the University lectures, and even organized special classes for women. Nothing very definite or permanent was done, yet an important beginning had been made. A more decisive step was taken in 1873, when a committee was formed, of which Mrs. Creighton and Mrs. Humphry Ward were joint secretaries, and which included among its members Mrs. T. H. Green and Mrs. A. H. Johnson. This body did much to prepare the way for more definite schemes. It arranged classes and lectures for women, and drew many eminent persons into interest in the matter. Such friends as A. H. D. Acland, Professor T. H. Green, Canon Scott Holland, Dr. Magrath, Bishop Percival, Bishop Talbot, and Dr. Spooner began to concern themselves with the question of the higher education of women.

The first-fruits of the pioneer work done by the 1873 committee were seen in the year 1878, the first great landmark of advance. In that year a movement began which aimed at bringing women to Oxford for purposes of study. The month of June 1878 witnessed notable events. On the 4th a meeting consisting of seventeen well-known Oxford residents was held. It decided that it was desirable 'to attempt the establishment in Oxford of a small hall or hostel in connexion with the Church of England, for the reception of women desirous of availing themselves of the special advantages which Oxford offers for higher education'. This was the foundation meeting of Lady Margaret Hall. A divergence of opinion led to other meetings in favour of an undenominational foundation, which gave birth to Somerville Hall, now Somerville College. Both Lady Margaret Hall and Somerville Hall were opened in October 1879.

Women's Education at Oxford

But still more had happened in June 1878, for on the 22nd of that month a meeting was held to form an 'association for promoting the higher education of women in Oxford'. The foundation of the Association for the Education of Women, the main business of which was the arrangement for the tuition of women students, their admission to college and University lectures, and the arrangement of special classes for women, preserved unity in educational matters, in spite of differences in opinion on denominational issues. The minute of the foundation meeting of the Association for the Education of Women stated that the object of that association was to establish and maintain 'a system of instruction having general reference to the Oxford examinations for women over 18 years of age'. This minute referred to action which had been taken by the University in 1875, when it empowered the delegates of local examinations to conduct special examinations for women. The women so examined might or might not have worked in Oxford.

The University still gave no official recognition to the women in its midst either in 1875 or in 1884, when it took a further and most important step in admitting women to Honour Moderations in Classics and Mathematics, and the Final Honour Schools of Mathematics, Modern History, and Natural Science. By the end of 1894 all the University examinations for degrees in Arts and Music had been opened to women, but separate honours examinations for women were held in English until 1895, and in Modern Languages until 1904. They ceased when the University instituted honour schools in those subjects. There was no obligatory intermediate examination.

The bulk of the women sitting for these examinations were naturally women who had studied in Oxford, but the University Examiners issued Honour and Pass lists of women containing the names of some who had studied at the Royal Holloway College and elsewhere. The responsibility for admitting women to these examinations was until 1910 left with the delegates of local examinations.

In the meantime the number of women students in Oxford

and the number of women's societies increased. In 1886 St. Hugh's Hall was founded by Miss Elizabeth Wordsworth, and in 1893 St. Hilda's Hall by Miss Dorothea Beale. In that year a definite organization was made for women students resident in Oxford who were not members of one of the halls. These students were under the supervision of a secretary of the Association for the Education of Women. In 1888 a Register of such students had been made, but not until 1893 did they have any separate organization or their own head. Mrs. A. H. Johnson, who was Secretary of the Association for the Education of Women, was appointed Principal of this body of Home-Students.

In 1896 an attempt was made to open the B.A. degree to duly qualified women. A resolution to that effect was proposed in Congregation, and defeated by 215 votes to 140. Resolutions proposing diplomas for women who possessed the same or other qualifications were also defeated. The time was not ripe, and some cordial friends of the higher education of women opposed the movement. In 1908 came a further and more successful movement for the recognition by the University of the Oxford societies of women students. The Hebdomadal Council appointed a committee to consider the institution of a special delegacy to deal with the women students.

Hard on the heels of the appointment of this committee, though not in connexion with it, came the great letter from Lord Curzon of Kedleston, then Chancellor of the University, on 'Principles and Methods of University Reform', in which he strongly advocated the granting of degrees to women. His cogent arguments rested on the interests of the women students in the wider opening to them of the educational resources and instruction of the University, and in the desirability of their being subject to some form of academic discipline and control; on the interests of the women teachers and their status in institutions and places outside Oxford; and on the interest of the University itself, since the granting of such a privilege would on the one hand

Women's Education at Oxford

encourage the ablest women to come to Oxford, and on the other give to the University some degree of control over the women and over the institutions to which they were attached.

The immediate upshot of the committee appointed by the Hebdomadal Council and of Lord Curzon's letter was official recognition of women working in Oxford by the formation in 1910 of a University delegacy for women students. Women, although not members of the University, were expressly made eligible to serve on the delegacy. To that body was transferred from the delegacy of local examinations the duty of entering women for University examinations. To the new delegacy was formally entrusted the responsibility for governing the Society of Home-Students.

During the ten momentous years from 1910 to 1920 the consideration in which women were held advanced in the academic as it did in the civic and industrial worlds. Before the War Lord Curzon's advocacy of degrees for women had induced the Hebdomadal Council to draft a statute which went farther than he had suggested. The admission of women to the parliamentary franchise encouraged further aims, and when the final statute was brought forward in 1920 and passed Convocation without opposition, it admitted women to matriculation and graduation with full membership of the University. In Michaelmas Term 1920 women entered upon their full privileges. Degrees by decree were conferred upon the heads of the women's societies and upon those tutors who, having been students before there was any prospect of degrees, had not taken the full degree course. At this stage the Association for the Education of Women was dissolved after successful labours of forty-two years. A special University delegacy was made responsible for the affairs of the Society of Oxford Home-Students; the Women Students' Delegacy was dissolved; the work of entering women for the various examinations was transferred to the five societies of women students; and the Women's Property Committee was established to deal with any property held in common among the women's societies.

6 OXFORD FROM THE NORTH
From the UNIVERSITY ALMANACK for 1849



Women's Education at Oxford

Since 1920 there have been various modifications of the women's statute, but the work put into it had been well done, and in principle it remains unaltered. By it and other statutes women are admitted under the same conditions as men to be members of Convocation and Congregation, of the Hebdomadal Council, and of various delegacies, boards, committees, and bodies of curators or visitors. It enables them to act as examiners, it makes it possible to open University fellowships and scholarships to them. There are now few of such fellowships and scholarships for which women are not eligible; most academic positions and academic honours are open to them. The drafting of the women's statute expressly precludes the application of any other part of the University Statutes to women which is not mentioned in the women's statute, or in which a special clause concerning women has not been inserted. With the passage of time an increasing number of such insertions has been made. Women undergraduates have gradually been brought under the same proctorial control as men, and in 1931 the whole of the statute dealing with the discipline of male undergraduates was made applicable to women.

The government of the women's colleges differs from that of the men's. Since 1925 all the colleges have been incorporated by Royal Charter. In all cases the Principal and Tutors who are official Fellows are members of the governing body, but in several respects the government differs from that of the men's colleges, since there are additional members of the governing body who may hold office in the University or in other colleges, or who may have no official connexion with the University. The power of electing some of these members lies with former students of the colleges whose names have been retained on their books and who have complied with the requirements for membership of the association of old students or senior members. Of the four resident bodies, Somerville, St. Hugh's, and St. Hilda's have exchanged the name of 'Hall' for that of 'College', Lady Margaret Hall alone retaining the older name; the difference

Women's Education at Oxford

in name is not associated with a difference in status. The government of the Society of Oxford Home-Students is more nearly like that of St. Catherine's Society (the men's non-collegiate body), since both are governed by a University Delegacy, but the Society of Oxford Home-Students' Delegacy, like the governing bodies of the women's colleges, contains members of both sexes.

In 1879, when the Association for the Education of Women made its constitution and Lady Margaret Hall and Somerville College were opened, there were 21 women resident in the two halls, and 25 others, some living at home and some with relations, some part- and some whole-time students. None were, or could be, graduates or undergraduates. Fifty-two years later, in 1931, there were 755 women undergraduates, of whom 542 were living in, or attached to, one or other of the women's colleges, and 213 members of the Society of Oxford Home-Students. There were also 63 women graduates reading for diplomas or research degrees. Half a century ago no woman could enter for any of the University degree examinations: in 1931 some 240 took the honours examinations of the University.

RHODES SCHOLARSHIPS

By SIR FRANCIS WYLIE

THE Rhodes Scholarships, for students from the British Empire, the United States, and Germany, were established under the will of the South African statesman, Cecil John Rhodes. Of him this is not the place to speak. His history is known, its tragedy and its romance. His name will live in the world so long as men speak of Southern or of Northern Rhodesia; and in Oxford as long as there are Rhodes Scholars, or the house which his Trustees have built there to his memory.

Scholarships endow education, but at times they have a further end in view: and Rhodes's motive in founding his scholarships was in fact political. To the Jesuits education was an instrument of policy, and it is from the Jesuits that Rhodes's scheme derives.

His scholarships are best understood—are indeed only fully understood—in the light of the successive wills which he drew up between the years 1877 and 1899. It was in the former year that, while still an undergraduate and barely twenty-five, he made his first will. By it he bequeathed all his wealth—at that time presumably modest—to the Secretary of State for the Colonies for the time being, and to a certain Mr. Shippard, Attorney-General for Griqualand West, to promote the extension of British rule, the consolidation of the British Empire, the restoration of Anglo-Saxon unity, and 'the foundation of so great a Power as to hereafter render war impossible and to promote the best interests of humanity'. These were the ideas upon which the young diamond-digger of Kimberley had been brooding as he sat, as one who knew him recalls him characteristically sitting, aloof from the very differently minded diggers about him, on an upturned bucket, in an old pair of flannels. And these ideas never left him. They were the 'thoughts' which Table Mountain—his Church he called it—brought to him. They

Rhodes Scholarships

were his companions as he sat, often the day long, on that solemn, because so lonely, spot in the Matoppos where now, by his own choice, he lies.

He drew up six wills in all, at intervals of a few years. These wills differ in details, but the ideas which inspire them remain the same—the consolidation of the British Empire, the union of the English-speaking peoples, the promotion of peace throughout the world.

It is in the will of 1893 that scholarships first find a place. He was on board ship, in the Red Sea, when the idea came to him of establishing scholarships at an English residential university for students from the British Colonies; and he lost no time in acting on the idea. By the will which he then drew up scholarships were left to Australia, New Zealand, South Africa, and Canada. Between 1893 and 1899, the year in which he made his last will, the scope of his foundation had widened. In particular, America had come in. For the inclusion of Americans W. T. Stead, the journalist, claims responsibility—and there is no need to question his claim. The ideal of Anglo-American co-operation in the work of winning peace for the world had inspired Rhodes's thinking from the first; and in Stead he found a fellow-worker whose enthusiasm matched his own. The intimacy of these two men, to the world's eye so different, is indeed one of history's minor romances. Rhodes named Stead as a Trustee in three successive wills.

By his final will, then, Rhodes established scholarships at Oxford for the British Dominions and for the United States. There were to be eight annual scholarships for South Africa, six for Australia, two for Canada, one each for New Zealand, Newfoundland, Jamaica, and Bermuda—that is, twenty annual scholarships tenable for three years, making sixty in all. In America each State or Territory of the Union was to have two scholarships, making a total of ninety-six American scholarships.

How came it that Rhodes, the Master-Imperialist, should have allotted ninety-six scholarships to the United States and

Rhodes Scholarships

only sixty to the whole of the British Empire? Did he know how many States there were? And how came it that, of the eight then existing Canadian Provinces, only two (Ontario and Quebec) were remembered in the will? Australia, with a population, at that time, of roughly 3,700,000, was given eighteen scholarships; Canada, with some 5,340,000, only six. One could wish for an answer to the questions which these figures raise. It is too late. Nor does it now matter. The Trustees have adjusted the balance by the creation of forty extra scholarships for the Dominions. To-day one hundred scholars are elected for the British Empire and ninety-six for the United States.

The will here referred to was completed in 1899. Two years later Rhodes added a codicil creating fifteen scholarships for German students. Although an afterthought, and standing somewhat aside from the main motive of the Foundation, the codicil has nevertheless its significance—its hint of hesitation. Was Anglo-Saxon enough? Would Teutonic not, perhaps and after all, be safer? Rhodes lets us in to his thought. ‘A good understanding between England, Germany, and the United States of America will secure the peace of the World, and educational relations form the strongest tie.’ That was written in 1901. Thirteen years later England and Germany were at war. Under the stress of war Rhodes’s codicil was cancelled by Act of Parliament, and the money so released was used by the Trustees to create scholarships for places in the Dominions which had none.

In 1929, however, the Trustees re-created scholarships for Germans, and two scholars now come each year from Germany. To that extent Rhodes’s will, codicil and all, operates once more.

Rhodes’s will was published in the early spring of 1902. Shortly afterwards the Trustees appointed the late Sir George Parkin, Head Master of Upper Canada College, Toronto, to be organizing secretary. For the next eighteen months Parkin was travelling round the Dominions and the United States, stimulating (as he well knew how) interest in

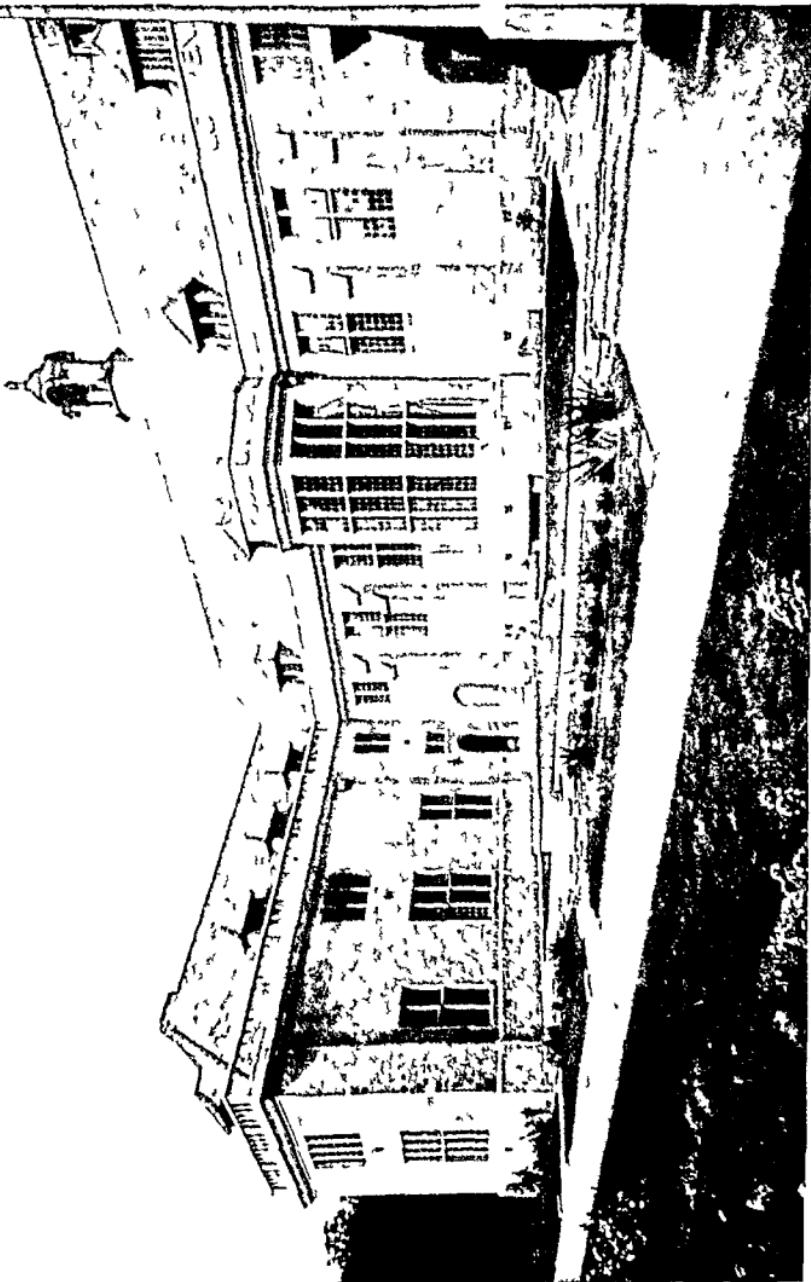
Rhodes Scholarships

the scholarships, and devising machinery for the selection of scholars. The general character of that machinery is everywhere the same. Scholars are nominated by a local Committee whose nominations are subject only to ratification by the Trustees. In this business of selection old Rhodes Scholars are taking, as their numbers and standing grow, a share which is everywhere important and in America decisive.

Rhodes Scholars are spread over the University, as Rhodes himself suggested. That is just plain policy. Nor could it be otherwise; for every college sets a limit to the number of overseas men it will admit. Indeed, in these post-war days, when Oxford finds men beating at her doors, this limit makes the business of the distribution of Rhodes Scholars less simple than it was. Thanks, however, to the sympathetic co-operation of the colleges, there has, so far, been no need to go outside Rhodes's own University. And perhaps there never will be.

Rhodes Scholarships have a character of their own. Rhodes distrusted the 'mere bookworm'. He desired that, in the selection of scholars, regard should be paid, not only to intellect, but at least as much to character, and even to some extent to physical vigour. The equating of disparate qualities is never easy; and it may be that in the early days the athlete got more than his due. However that may be, it is clear that to-day character and ability tend to determine elections, though 'fondness for and success in manly outdoor sports' contribute to the decision.

Since 1903 some 1,500 Rhodes Scholars have passed through Oxford. Of course they have fallen short, some of them, of our early expectations, so high and, one sees now, so unfair. But they have justified Rhodes of his faith. They have brought something distinctive to Oxford, and themselves have gained in breadth of sympathy and outlook. And of their academic record they have no need to be ashamed. They do not, indeed, win as many first classes in 'Schools' as open Scholars and Exhibitors, but they run them close if first and second classes are taken together; and they leave



7. RHODES HOUSE

close Exhibitioners and Commoners straggling far behind. It is fair also to remember that many of the abler Rhodes Scholars, of whom a high class might have been expected, do not take the Honour Schools at all, preferring an Advanced Degree. And when they pass from Oxford they seem to retain, almost surprisingly, their affection for her and their respect for her ideals.

But are they, it is often asked, making their mark in the world? Those who put this question do not always reflect that the older Rhodes Scholars are only now approaching fifty, while the majority are under forty. They are still busy, most of them, earning a competence, and a political career is scarcely within their reach. Any estimate of their standing or achievement can only be tentative, and may be unconvincing. Those, however, who have some claim to be heard tell us that in their several spheres Rhodes Scholars are beginning to count, and that, as they arrive at influence, that influence is such as Rhodes would not disown.

Information as to the conditions governing the selection of scholars in the different Dominions, in the United States, or in Germany, can be obtained on application to The Secretary, The Rhodes Trust, 17 Waterloo Place, London, S.W. 1, or from The Warden, Rhodes House, Oxford.

ARCHITECTURE

By E. A. GREENING LAMBORN

WHEN Mr. Belloc apostrophized his University as
malarious spot,
which people call medeeval, though it's not

he was thinking only of academic Oxford; the other half-truth is expressed in J. R. Green's complaint that the University had found his native town an important municipality, and reduced it to a collection of lodging houses. The city itself was already a large and important town before the Norman Conquest, and its buildings are representative of every century from the eleventh downwards; but those of the University and the colleges belong, for the most part, to the late medieval, the Renaissance, and modern periods. Only one college, Merton, and one University building, the Old Congregation House, can show work of an earlier style than Perpendicular, and even the later medieval work, in most of the colleges, has been altered by refacing and by the insertion of new windows; Magdalen alone can claim to possess an unaltered medieval quadrangle. Nevertheless the tradition of the splendid medieval buildings of which, until the Spoliation, Oxford was full, persisted long after their destruction at the Reformation; so that the work of the early Renaissance has here far more of the medieval than of the Classic Spirit, and even when the Palladian style had established itself its reign in Oxford was never unchallenged by the older tradition. Side by side with Radcliffe's dome stand the Gothic towers of All Souls; and some of the masons that worked on the one may have helped to build the other. The second quadrangle of University College is contemporary with the Palladian front of Queen's that faces it across the street, though it is indistinguishable in style from the adjoining quadrangle of the early Renaissance.

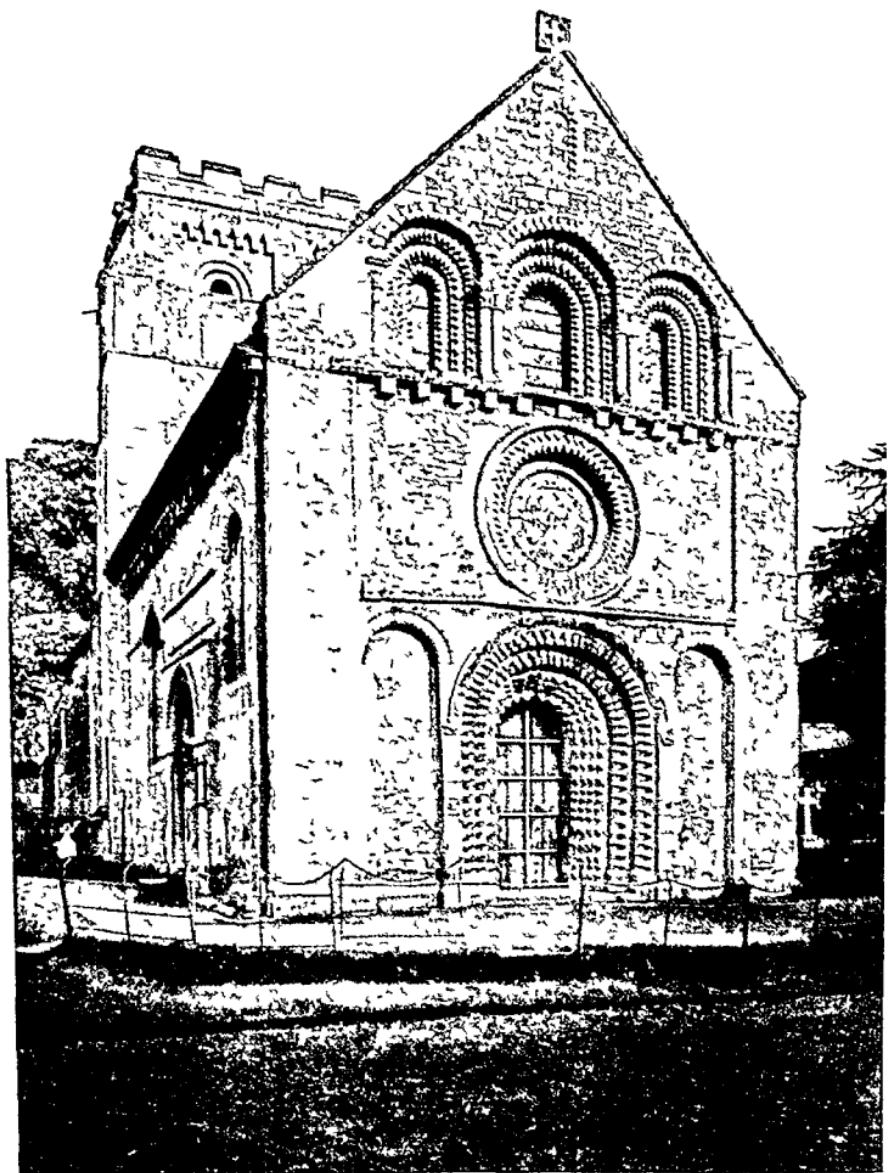
Of academic Oxford it is truly said that she whispers from

her towers the *last* enchantments of the Middle Age. Our examples of early medieval architecture are to be found mainly in ecclesiastical buildings, in the Cathedral, the city churches, and the older college chapels; there is no town in England in which the medieval styles can be studied with an equal wealth of illustration. The purely academic buildings afford an equally rich store of examples of Renaissance work, both early and late.

With the exception of New Road, cut through the bailey of the castle in 1771, and King Edward Street, laid out a hundred years later, the streets of the city are those of Anglo-Saxon Oxford. But the only building surviving from that period is the tower of St. Michael's Church in the Corn-market. Its pre-Conquest origin is suggested by its slim and lofty proportions, its lack of buttresses and stairway, the long-and-short work on its angles, the recessing of its window-openings so that the oiled parchment or lattice or other substitute for glass might be protected from rain, and the baluster shafts of its belfry lights. These shafts with their barrel-like proportions were turned in a lathe; their purpose is to support the long stone which serves as a common impost for the two small round arches that were more easily constructed than a single large one. The practice of setting long and short stones alternately upright and flat at the angles of a building, and of splaying the windows externally, came into fashion late in the Anglo-Saxon period, and was abandoned soon after the Conquest.

Traces of round-headed arches in the east wall of the Lady Chapel in the Cathedral, similar to those of the blocked doorways in St. Michael's tower, suggest that this part of the Cathedral may be a vestige of the Priory Church of St. Frideswide, which is recorded to have been rebuilt in 1004. Like the other churches of the city, however, it was swept away in the great outburst of building activity which followed the Norman Conquest.

The first manifestation of Norman energy in Oxford was naturally of a military character: it is the great mound of



8. IFFLEY CHURCH. THE WEST END

earth that overhangs the New Road. This was the 'motte' of the castle built by Robert D'Oilli, the Conqueror's lieutenant in Oxford, to control the town and district. Its prototype may be seen in the Bayeux Tapestry in the 'castle' thrown up at Hastings immediately after the battle. It consisted of a moated mound surmounted by a stockade and surrounded by a levelled area, the bailey, defended by a ditch, with a palisade on its inner edge. A steeply sloping bridge across the inner moat gave access to the motte from the bailey, and a drawbridge defended by a wooden tower spanned the outer ditch.

Such a fortification could be thrown up by forced labour in a very short time. Its timber defences could be replaced by masonry at leisure. Its weakest point was the barbican, the tower defending the entrance, which could be easily set on fire. By 1071 D'Oilli had replaced this by the existing stone tower overhanging the river. Its high doorway could be approached only by means of a ladder, its basement only by a trap in the first floor; the arched openings in its topmost stage gave access to a wooden platform or gallery from which stones and other missiles could be discharged upon the heads of an attacking force; its roof served both as a post for archers and as a kitchen.

Its enormously thick walls illustrate the prodigal use of material by which Norman building is distinguished alike from the Anglo-Saxon and Gothic styles. This monumental character is the most striking feature of Norman architecture. It was the lack of it in the otherwise well-built Anglo-Saxon churches that led to their destruction by the conquering race when, by the end of the eleventh century, their hold on the country was secure.

What the Normans brought into England was not better mason-craft but larger ideas in design, and particularly the ambition to make their buildings at once more monumental and less inflammable, by ceiling them with a stone vault in the Roman manner. The resources of a semi-barbarous people did not permit them to build arches of the vast span of a

Roman aqueduct or a modern railway bridge: they could not construct the timber framework or centring necessary to support a wide arch in course of construction. The device invented or adopted to minimize the centring required gives to the Norman arch its most readily recognized characteristic.

Oxford has many excellent examples of Norman architecture, though these represent only a fraction of the work that transformed the city in the twelfth century. Iffley Church (Pl. 8) is the finest of them, and the arches of its doorways admirably illustrate the method of construction typical of their age. Instead of being cut straight through the wall in the older fashion the arch is built up in a series of rings, for the lowest and smallest of which alone is centring required; this, when complete, serves as a support for the next, and this in turn for the ring or 'order' above it until the whole is finished.

This treatment of the arch of course affects the jambs (sides) of the opening, since each ring or order of the arch must have its proper support. So the jambs too are recessed, and often, as in the north and south doorways and the chancel arch at Iffley, shafts are inserted to carry the orders of the arch. The shafts bear capitals of uniform and easily recognized shape, the 'cushion-cap'; they are formed from cubical blocks of stone of which the lower angles have been rounded off to fit the circular shaft while the upper part is left square to carry a tile-like abacus, the upper edge of which projects above the cap while the lower edge is 'chamfered' or sloped to fit it. The base is a flattened sphere resting on a low, square plinth. Often the faces of the cap are grooved like a scallop-shell. Those on the south doorway at Iffley are enriched with figure-sculpture of remarkable interest.

The multiplicity of planes in the orders of the arch offered a field for ornament, of which, at Iffley full opportunity was taken. Here as everywhere in Anglo-Norman work the prevailing ornament is the chevron or zig-zag, a form easily cut with the axe that was at this time the mason's chief tool. It is particularly prominent on the doorway and windows of the front.

Architecture

Other buildings in which Norman arches may be studied are St. Peter's Church in Queen's Lane (Pl. 9), St. Aldate's (north chapel), the Chapter House (doorway), Holywell, and Headington (chancel arches), St. Ebbe's, and Cowley (doorways), and Ferry Hinksey (door, windows, and chancel arch).

The stone ceilings of the chancels at Iffley and St. Peter's represent an ideal at which every Norman architect aimed, though its achievement has often brought his work to ruin; for the mechanics of arch-thrusts and their annihilation by buttresses were not yet properly understood. It will be observed that the vaults at Iffley were saved from collapse by large buttresses added at a later date; the original buttresses are the broad, shallow 'pilasters' which project only a few inches from the face of the wall.

The Norman vault is of the cross or quadripartite form used by the Romans. But lack of centring prevented our builders from constructing its four sections as a whole until the age of Wren when the cloisters at Queen's College and Worcester, for example, were ceiled by groined cross vaults in the true Roman manner. The Norman method, well seen at Iffley and St. Peter's (Pl. 10), was to construct a skeleton of arches on the lines of the groins, like the ribs of an umbrella, and then to fill in the 'webs' or spaces between them one at a time, using the same set of centring for each in succession. This plan enabled the builders to reduce the thickness of the vault and so at once to economize material and increase the stability of the structure. It was this last desideratum that led the late Norman architects to introduce the pointed arch, which is not only more stable than the round one but has the further advantage that its height is independent of its span. The ceiling over the sanctuary at Iffley shows how it thus became possible to bring wide and narrow arches alike to the same level in the crown of the vault.

In the third quarter of the twelfth century the pointed arch came into general use in vaults, and by the beginning of the thirteenth, when the chancel at Iffley was lengthened, it had superseded the round arch in the doorways and windows

also. By this time too it had been realized that the danger points of a vault are its springings where the arch thrusts are concentrated, and that these must be met by adequate abutment in masses of masonry projecting from the wall. These buttresses, as may be seen at the eastern angles of Iffley church, were at first of slight projection and were therefore arranged in pairs; but as their function was better appreciated they grew steadily larger, while the wall itself grew thinner.

The new system of building with pointed arches and buttresses is known as Gothic, and the experimental stage in which pointed and semi-circular arches were used together is called the Transition. It occupied the last half of the twelfth century, during which the Cathedral was in course of rebuilding. No church in England better illustrates the development of Gothic from Norman. At the east end, begun about 1150, all the arches are round, and the work has the massive character of the Norman style. But as we go westward we find the pointed arch prevailing alike in the windows and the ribs of the vaults in the nave aisles, which are far lighter than those of the choir; they are made so by the deep hollows cut with the chisel, giving sharp contrasts of light and shade. Only the square, tile-like abacus on the caps remains to show that the Norman has not yet developed completely into Gothic.

If we go into the Lady Chapel, c. 1220, we shall find that even this feature has now changed its form; its corners and its square upper edges have been rounded off, its lower edge has been deeply under-cut, and the cap supporting it has been decorated with carved foliage of a peculiarly graceful form, at once ornamental and expressive of support to the abacus beneath which it springs. This 'stiff-stalked foliage,' the under-cut abacus and the hollowed 'water-holding' base, are the most characteristic features of the first stage of Gothic, known as Early English or First Pointed; from the blade-like form of the windows of the period it is sometimes called the Lancet style. It is represented in perfection in the Chapter House, c. 1225 (Pl. 11).

St. Giles's Church is another excellent example of Early English Gothic. Its font shows the pyramidal 'dog-tooth' ornament peculiar to the style, and its lancet windows the grouping which was to produce a further great change in building style in the second half of the century. A projecting ridge of stone, the hood-mould, is set over the head of a window to throw off the wet; in the upper stage of St. Giles's tower, c. 1200, it will be noticed that lancets are set together in pairs under a common hood-mould, and the space between their heads and the hood-mould is pierced with a third small lancet. Obviously a circular or triangular opening would more gracefully have filled this space; and when a few years later, c. 1220, the Cathedral spire was built, its lancet lights were similarly grouped in pairs, but a quatrefoiled circle was cut in the space above their crowns.

This grouping of variously shaped openings to form a single composition produced patterns known as tracery. At first, as we have seen in St. Giles's tower, the openings are pierced separately, and are then called plate-tracery; but by the time when the eastern windows of the church were inserted, c. 1265, it had been realized that the simplest way of producing a composition of this kind was to construct a single large opening in the wall, and build up a pattern within it by means of stone bars, straight and curved. St. Giles has thus our earliest examples of tracery of either kind. Henceforward for more than a century the development of window tracery became one of the chief concerns of the architect.

It was at this date that the earliest of our colleges was endowed and planned. Hitherto the members of the University had lodged in the houses of the townsfolk; Walter de Merton secured a permanent home for his scholars by purchasing three tenements near the parish church of St. John the Baptist. It is possible that the Munitment Room at Merton represents one of them, bought from a London Jew—for the Jews, having securities to safeguard, were early builders of stone houses, and this building is certainly of the Founder's date. All the early founders adopted the same plan, and

housed their scholars in a group of contiguous houses, but the only survival of this primitive type of college is the group of medieval 'mansions' at Worcester College, that once housed the novices of the Gloucestershire Benedictine abbey sent up to study at the University (Pl. 2). Not until New College was built in 1380 did the quadrangular plan become the general arrangement; and even then the private tenements in which the members of earlier foundations had been lodged influenced the layout: for each 'staircase' is simply a separate house. Their grouping round a quadrangle was no doubt suggested by the plan of the medieval 'hospital' or alms-house with which Wykeham was familiar at St. Cross. Merton also obtained the advowson of St. John's Church, both that its revenues might assist his college and also that it should serve as its chapel. The first architectural enterprise of his trustees was to rebuild it, beginning with the chancel, and in its windows we may see the characteristic features of the second stage of Gothic known as the Decorated style (Pl. 12).

The tracery in these windows was obviously designed with the aid of a pair of compasses, by combining segments of circles to form a geometrical pattern. But designs of this simple kind did not long satisfy the architects, as may be seen in the windows of the sacristy built in the early years of the fourteenth century. Here the curves of the tracery are much more complicated; their flowing lines seem to have cast off the restraint of the compass and to imitate the free growth of natural foliage; in this it corresponds with the decorative carving in the chapel, which reproduces the actual forms of the leaves of oak, briony, vine, and maple. The Latin Chapel in the Cathedral contains our best examples of this flowing tracery. Its ceiling admirably illustrates the progress of vaulting in the century that separates it from the neighbouring Lady Chapel; the introduction of intermediate ribs, and especially a ridge-rib in the crown of the vault, reduced the size of the sections or 'webs' and so simplified their filling-in.

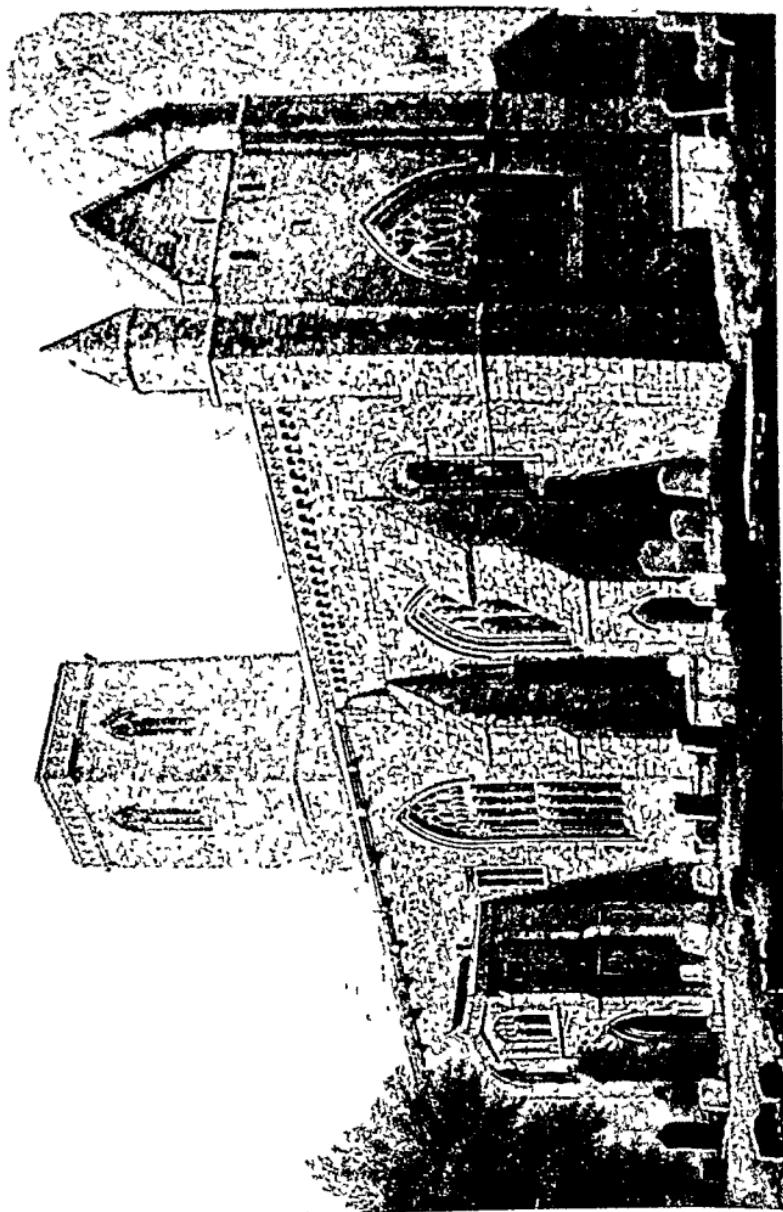
carved with naturalistic foliage which may be seen also on the Shrine of St. Frideswide, 1289, and the tomb of Prior Sutton near by; the last shows also the ball-flower, the one conventional ornament of the Decorated style, unless we include the mouldings. In these the sharp contrasts of light and shade, seen in the arch-mouldings of the Lady Chapel, have given place to softer gradations produced by broader and shallower surfaces. The new ideal is seen to the best advantage in the arches and piers, particularly the bases, of Merton tower.

The most beautiful monument of the Decorated style in Oxford is St. Mary's Spire, completed soon after 1300. It was followed in 1320 by the Old Congregation House, a very plain structure for its date but historically interesting as the first building to be owned by the University in its corporate character. The south aisle of St. Mary Magdalene Church with its beautiful buttresses and parapet was built in 1337 (Pl. 13). The west window of this church, inserted about 1360, represents the ultimate development of the process begun in the windows of St. Giles's at the opposite end of the street. All trace of its geometrical origin has now disappeared from the tracery. The designer has ceased to consider the shapes of the openings and is concerned only with the lines of the stonework. They have the writhing curves of leaping flames or of the snake springing straight from the coil. Soon they were to straighten out completely, for the development of painted glass had created a general demand, and the glazier was now becoming a very important craftsman; he regarded the window as a group of panels in which his figures could be set, and so the shape of the openings again became the chief consideration in the design of tracery. Hitherto his work had been subordinate to that of the mason. He had been content to fill the tracery provided with silver-grey glass as a background in which small figures could be set, either as medallions like those in St. Michael's chancel, c. 1290, or in bands of colour as in the windows at Merton, c. 1300, and the Latin Chapel, c. 1360.

But when New College was built in 1380 its windows were fitted with a new kind of tracery formed mainly of straight bars and therefore known as Rectilinear or Perpendicular. Its advantage from the glaziers' point of view will be obvious to any one who examines the contemporary glass in the windows of the ante-chapel. Henceforward it was the universal fashion; All Souls was built in the Perpendicular style in 1440, Magdalen in the last quarter of the century, Merton transepts were completed in the new style in 1425, and the tower in 1450 (Pl. 12), St. Mary's Church was gradually but completely rebuilt in the second half of the century (Pl. 23), and Perpendicular windows filled with the new glass were inserted in the Norman walls at Iffley and St. Peter's (Pl. 9), in the new north aisles at St. Michael's, St. Aldate's, the new clerestory at St. Giles's, and, indeed in almost every church and college in the city. Although much of it perished at the Reformation and much more was taken out in the seventeenth century to make room for the work of Van Linge there is still a richer store of medieval glass in Oxford than can be found in any other English city except York. The ante-chapel at New College keeps intact most of the glass inserted in 1386 except that sacrificed in 1782 when Jarvis made the 'Reynold's window'. All Souls similarly preserves in its ante-chapel some of the glass inserted in 1442. There is good heraldic glass of the sixteenth century in the Library at Balliol and in St. Ebbe's church.

The great development of the buttress had made the stability of the roof independent of support from the walls, which therefore became mere screens of glass. The Divinity School, completed c. 1480, is an excellent example, being indeed one of the finest Perpendicular buildings in existence (Pl. 1). Its great windows occupy the whole space between the buttresses; and in order that they may do this the more completely their arches are flattened and their sills lowered. The patterns of their tracery are repeated in ornamental panels on the face of the walls and buttresses; their glass is protected from the weather by being set back from the face of the wall,

9. ST. PETER'S IN THE EAST
From Ingram's MEMORIALS



and their jambs are scooped out to form a wide hollow known as the casement moulding. It runs round every Perpendicular arch, usually accompanied by the double ogee, a wavy moulding whose curves are like those of an open book before use has made the pages lie flat. The bases of piers and shafts, those, for example, in the jambs of the doorway of the Divinity School, are much higher than those of the earlier styles; they have tall plinths, often octagonal, with an overhanging moulding. The caps are usually, the abaci invariably, polygonal. The arch of the doorway is set in a square frame or 'label' and the triangular spaces so formed are filled with shields of arms. The gateway of any college will furnish an illustration.

The ceiling of the Divinity School and that of the Cathedral Choir, c. 1500, illustrate the progress of ribbed vaulting since the building of the Latin Chapel in the mid-fourteenth century. But in the meantime a new type of vault had challenged the older type. This was the fan-vault, formed of sections of a curved cone or trumpet, fitted together like a series of panels. The porch of All Souls Chapel was roofed with a fan-vault in 1442, but most of our local examples, including the fine vault of the Hall Staircase at Christ Church, 1640 (Pl. 14), are due to the admiration of later builders for this beautiful medieval invention. Like the open timber roofs contemporary with them in the chapels and halls of Wadham, University, and Oriel they illustrate the survival of medieval technique in fulfilling the primary function of architecture, the provision of a roof. If Oxford is judged by this criterion she is the most medieval of the cities of the earth, for a large proportion of her ancient buildings, however otherwise altered, preserve their original coverings, and most of her later roofs were constructed in the traditional manner. This may be said also of the seventeenth-century glass of which Oxford possesses an unrivalled store.

Ruskin, whose teaching on political economy was sounder than his theories of art, believed that the Perpendicular Style was a decadent stage of Gothic, and was doomed to perish on that account. But as its last achievements in Oxford gave us

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our loveliest college, Magdalen (Pl. 16), some better reason must be found for the great change of style which began in the middle of the sixteenth century and which not only gave us a vast number of new buildings but swept away a great many of the old.

The great revival of interest in the ancient civilizations had brought about a general demand for their lost amenities of life, and particularly for more comfort and privacy. The domestic arrangements of the Middle Ages were no longer tolerable, either in private houses or in colleges; and so the chief concern of the builder was the development of domestic architecture. The great traceried window would obviously be out of place in the new type of house: men wanted windows that could be opened and rooms that could be kept warm. So the older colleges were reconstructed or rebuilt and in the new foundations the medieval style was modified. Thus it happens that the most representative of Oxford's colleges is Wadham, almost the last of them to be founded. It is here that the type of building most characteristic of the collegiate system can best be studied.

The builders of Wadham (1613) retained the medieval plan of grouping sets of rooms round a quadrangle, for this was obviously a convenient arrangement for shutting out the world and shutting in the scholars: it included the great gateway of traditional design, a legacy of military architecture, flanked by a porter's lodge and with rooms for the Warden above it, so placed that he could supervise all comings and goings; they copied also the medieval arrangements in the chapel, so that it is often taken for a work of the fifteenth century; and they divided the chamber windows by mullions because these facilitated glazing and the fitting of casements. But they abandoned tracery and cusping and the pointed arch and simplified the mouldings on the jambs and mullions. For the embellishment of the work they depended mainly upon the ornaments of the tower set in the middle of the principal façade of the building; and it is here that the influence of Italian architecture, which was soon to

produce another revolution in English building, first manifests itself.

The tower, like its contemporaries at St. John's, Merton, and the Schools, is ornamented with external columns supporting not arches but lintels; they thus represent a building principle which had hitherto been most conspicuous in England in the construction of Stonehenge.

The lintel is the most obvious and therefore the most primitive solution of the builder's first problem—how to span a space: the first bridge, the first roof, the first door-head must have been a horizontal stone or beam. Civilization in Egypt and Greece developed the post and lintel into things of beauty, and produced the Orders of Classic Architecture, three types of Columns, each with its appropriate ornaments on shaft and lintel.

The earliest to be evolved was the Doric Order, illustrated by the columns of Canterbury Gate at Christ Church; in its perfect Greek form, its columns, like their prototype tree-trunks, have neither caps nor bases but stand upon square plinths, and carry a square abacus. The next Order was the Ionic, with low caps easily distinguished by the volutes (spirals) at their angles, well represented in the Ashmolean Museum; the third was the Corinthian; its large bell-shaped capital is richly carved with the deeply serrated foliage of the acanthus. It is illustrated by the columns of All Saints' Church.

Our examples, however, are themselves but imitations of Roman versions of the Greek Orders. Rome not only coarsened the details of the orders she adopted but devised a vulgarized type of Doric, the Tuscan, seen in the Fountain on the Plain, and combined the foliage of the Corinthian, and the volutes of the Ionic in the Composite Order, illustrated by the topmost columns of the Schools Tower, where all five Orders may be seen superimposed with the Tuscan at the base.

The first half of the seventeenth century saw a great increase alike in the academic buildings and in the private houses of

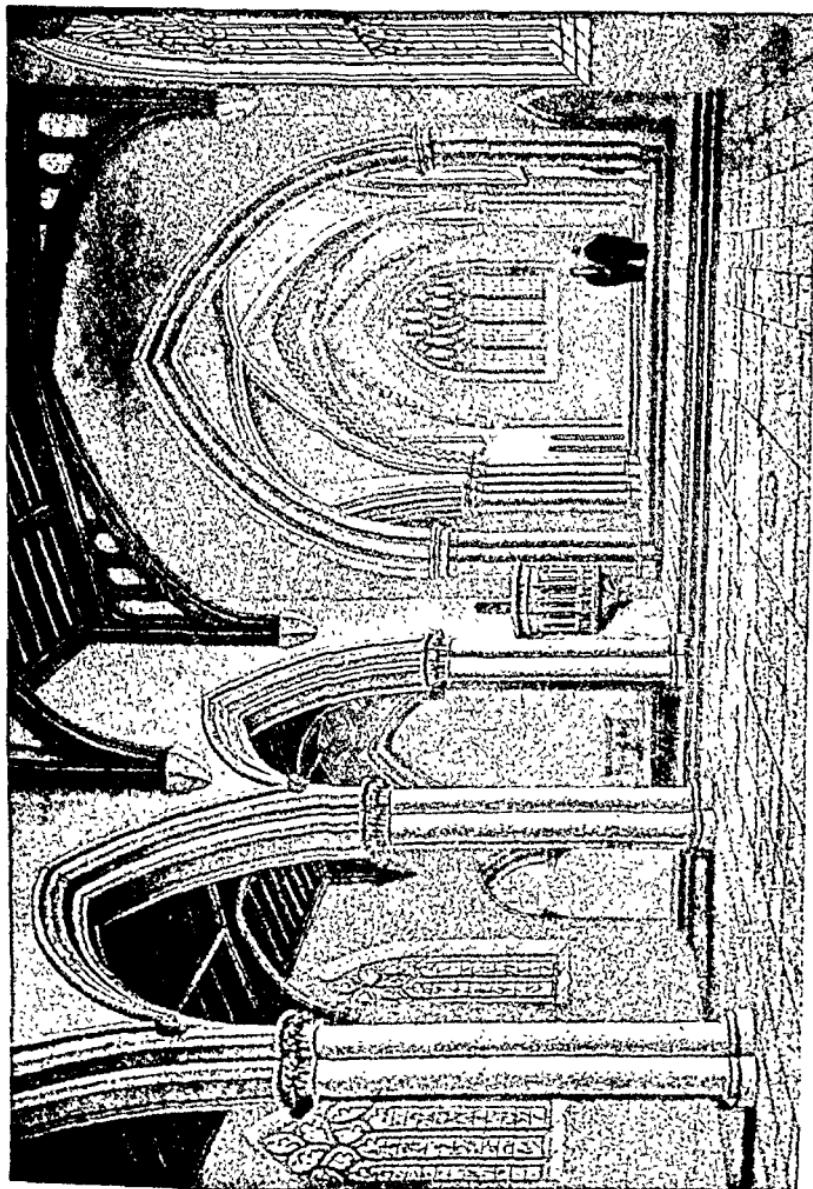
the City. Wadham was quickly followed by Pembroke, Jesus was completed, Oriel, University, St. Mary's Hall, and the Schools were rebuilt completely, new quadrangles were added at Lincoln and St. John's, new blocks at Merton (Pl. 12), Exeter, and St. Edmund's Hall, Brasenose added an upper story to its quad and remodelled its windows; its chapel built in 1656 may be recommended to the student as our most illuminating example of the mixture of Gothic and Classic details which distinguishes the English Renaissance. But the loveliest product of that period is the inner quad with the Garden Front of St. John's (Pl. 3).

In its colonnade it will be observed that the round arch has made its reappearance. It serves to remind us that the classic elements of our Renaissance architecture came to us from Italy. Rome quickly discovered that the lintel of the Greek Orders was inadequate to her needs: stones of the necessary length were unobtainable in the vast quantities required. The Roman architects therefore adopted the arch to span the larger openings in their walls but they usually flanked it with columns and set a lintel above it; as this, however, was supported along its whole length by the arch, it and its columns thus became a meaningless survival whose only function was decorative.

The design of the Garden quadrangle at St. John's is often attributed to Inigo Jones, who is popularly supposed also to have built the famous porch at St. Mary's. But the mixture of Classic and Gothic in these buildings represents the style to which the influence of Inigo Jones was soon to prove fatal; long study in Italy had made him a disciple of Palladio and an ardent revivalist of the Roman style of building. His ideal may be seen in Oxford in the gateways of the Botanical Gardens, executed by Nicholas Stone in 1631 and perhaps designed by Inigo Jones himself. They remained a prophecy for more than a generation, until Wren built the Sheldonian Theatre in 1669 in the pure Italian style,¹ which

¹ It is said to be on the plan of the Theatre of Marcellus. The roof was reconstructed in 1802.

10. INTERIOR OF ST. PETER'S IN THE EAST
From Ingram's MEMORIALS



was henceforth for more than a century to prevail almost unchallenged, and to earn for Oxford a new by-name as the City of Palaces.

Louis XIV's new Palladian palace at Versailles, which Wren had visited in 1665, served as a model for his garden 'quadrangle' at Trinity and for that at New College (Pl. 15), both of which were carried out, with some modifications, during the last quarter of the century. His pupil Hawksmoor at the same time was building the back quadrangle of Queen's, and, early in the eighteenth century, pulled down the whole of the remaining medieval work to build the front quadrangle. Wren himself designed the chapel, 1714, and the whole was finished in 1730. The student who wishes to acquaint himself with the details of Palladian architecture in England could find no better examples than the buildings of Queen's.

Meanwhile Dean Aldrich was building Peckwater Quad, 1705, and All Saints' Church, 1708, it is said to his own designs; but as Wren had already assisted him in the designing of Trinity College Chapel, 1694, it is possible that he had also some share in these. Another contemporary amateur was Dr. Clarke of All Souls, who is credited with the designs of Christ Church Library, and Worcester College, 1746. He was one of the Fellows responsible for a design to rebuild All Souls in the same style, which was frustrated by the earnest remonstrances of Hawksmoor, who, in spite of his clean sweep at Queen's, appears to have had an admiration for medieval work and even made some attempt to imitate it in his curious 'twin towers' in the back quad at All Souls, a strange anticipation of the Gothic Revival in the next century. A similar design to rebuild their college was entertained by the dons of Magdalen, but from lack of funds the only part of it to be completed was the New Buildings in the deer park, 1733. New College modernized its front quad by inserting Palladian windows and building an upper story towards the end of the seventeenth century, Corpus built a fine Palladian block on its Meadow Front in 1706, and Balliol added the rather dull Fisher Buildings to its south western corner in 1769. Other

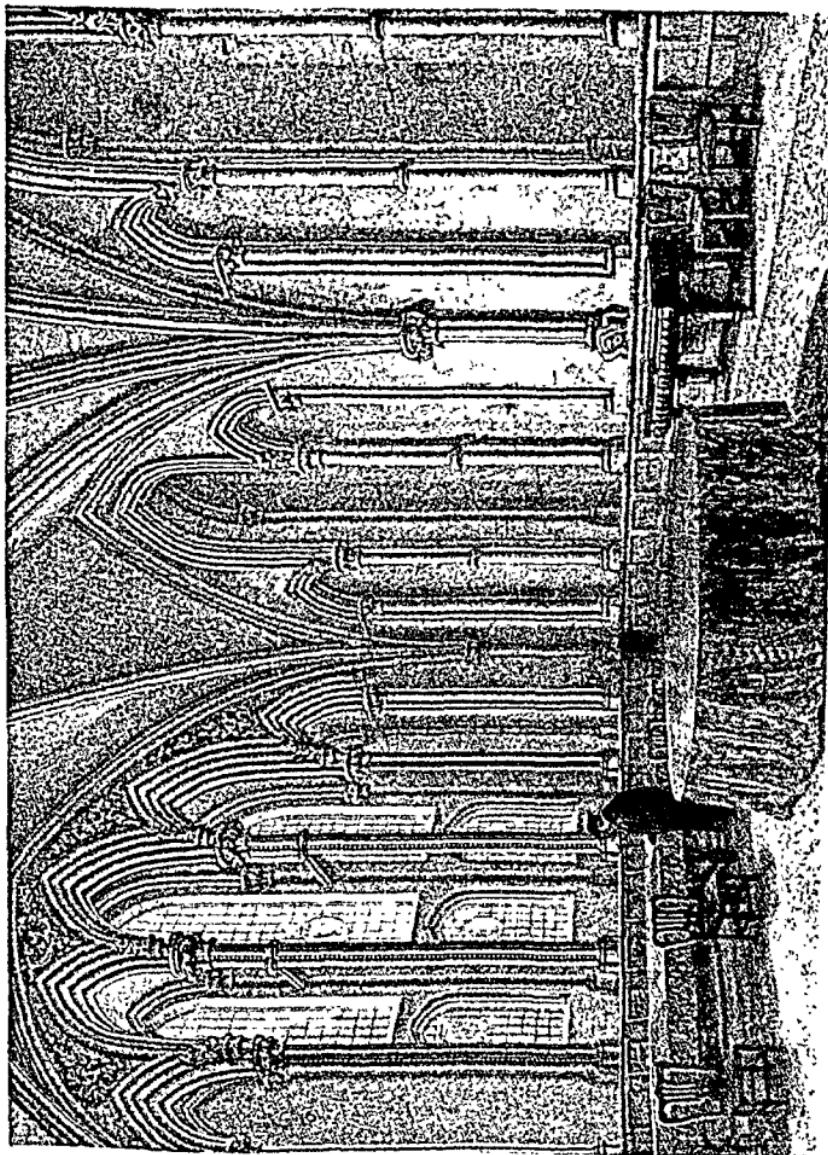
good examples of the Italian style are the Old Clarendon Press, 1712, the Library at Christ Church, completed in 1761, and the Chapel at Pembroke, 1732.

But the great monument of Palladian architecture in Oxford is the Radcliffe Camera, built by James Gibbs in 1749 (Pl. 21). It is our noblest example of a building in the Roman manner, as the Ashmolean Museum is our closest reproduction of the architecture of Greece.

Early in the nineteenth century the influence of the Romantic Revival and of the Oxford Movement combined to awaken interest in medievalism, and the effect was soon visible in architecture. When St. Clement's Church, which Newman had served as a curate, was rebuilt on a new site in 1828 the architect did his best to imitate a Norman building. A year or two later Newman began to build the church at Littlemore in Early English, and the Dissenters at the same time built the Congregational Chapel in George Street in a richer version of the same style. Then in 1841 came Sir Gilbert Scott who designed the Martyrs' Memorial with the north aisle of St. Mary Magdalen Church in the early decorated style of the Eleanor Crosses of 1291. Unfortunately the safe policy of close reproduction, which made this and Buckler's Perpendicular Schoolroom at Magdalen, 1850, the most successful efforts of the early Gothic revival, was soon abandoned and each architect attempted to give his own version of Gothic. The lamentable result is well illustrated at Exeter, where Scott produced at least a 'safe' building by a close imitation of the Sainte Chapelle, and an intolerably dull and feeble one in his own design for the Broad Street front of the college 1856. Of his Holywell front at New College, 1876, it must be said that he went from bad to worse. Its dullness was only equalled by Butterfield's contemporary buildings in Merton Grove which are now only an evil memory, for they have lately been assimilated to their surroundings by Mr. T. H. Hughes. Butterfield's monument in Oxford is Keble College, built in polychromatic materials, like the product of a Victorian child's box of bricks, in 1870.

II. THE CHAPTER HOUSE, CHRIST CHURCH

From Ingram's MEMORIALS



Meanwhile Ruskin with fatal eloquence was preaching the wholly mistaken doctrine that Venetian Gothic was the only genuine article, and his influence on the architect, Sir Thomas Deane, produced the University Museum, 1860, which externally is supposed to suggest the Doge's Palace, and inside resembles a railway station. Under the same inspiration Deane designed the Meadow Buildings at Christ Church, 1862, which would greatly benefit by the 'debunking' process lately applied to the neighbouring block at Merton.

A few years later Mr. Waterhouse began the creation of modern Balliol. Of its main frontage the best that can be said is that it has at least the historical merit of suggesting the military architecture of the Founder's period.

Other well-known architects who have left landmarks in our streets are Sir Charles Barry, architect of the Houses of Parliament, who added a western block to the High Street front of University College in 1843, Street the builder of St. Philip and St. James's Church and the London Law Courts, Blomfield who built St. Barnabas's Church in 1867 on the plan of an early Christian basilica, and Sir Thomas Jackson who, in the new Examination Schools in 1878, wisely reverted to the mixed style of the Early Renaissance, thus assimilating his work to the larger part of our collegiate buildings.

The professors of revived Gothic in the mid-Victorian Age were heavily overworked. They were tempted by the general demand for their services to take up far more commissions than they could adequately carry out. Magdalen, fortunately, delayed additions to its buildings until the first fury was overpast, and thus it happens that the loveliest college in Oxford had the happiest addition to its fabric, in St. Swithin's Quad, built by Mr. Bodley in the eighties. The college has been equally fortunate in its selection of an architect for the further extension in Long Wall. Magdalen thus competes with Mansfield, built by Mr. Champneys in 1889, for the honour of possessing the most beautiful modern buildings in the City.

From the foregoing sketch it will be clear that nowhere in

England can the successive styles of architecture be studied to better advantage than in Oxford.

In a walk round St. Peter's Church, for instance, may be seen examples of the work of every century from the twelfth downwards (Pl. 10). The caps and bases of the columns in the crypt are typical Norman; the groined vault represents the Roman cross-vault from which the ribbed vaulting of the chancel above was developed; there are good Norman windows, stringcourses and corbels in the south wall, and the doorway has an excellent selection of Norman enrichments. The arches and piers of the north arcade have thirteenth-century mouldings and foliage, with the water-holding base, and there are contemporary lancet windows in the Lady Chapel. The windows of the north aisle and the south-west window of the nave have good decorated tracery of the mid-fourteenth century. The porch, with its vaults and buttresses, is an excellent example of Perpendicular of the early fifteenth century, and the large window of the Lady Chapel with some original glass was inserted in 1433. The north transeptal chapel with its depressed arch and shallow mouldings is of Early Tudor date, c. 1500, and the great south window is contemporary; it was doubtless inserted to light the rood-loft, then a very important feature. The windows and doorway of St. Edmund Hall illustrate the general type of the early seventeenth century, while Queen's shows the great apse of its chapel, reminding us of the Roman use of that form alike in domestic and public buildings and also in the early Christian churches, with several types of eighteenth-century windows having both round-arched and lintelled heads.

The origin and development of window tracery, again, will be illustrated in all its stages by means of the windows available to an observer in St. Giles's churchyard. In the south aisle are single lancets of the early thirteenth century; in the north are groups of the mid-thirteenth; in the tower will be seen the very earliest examples of plate-tracery, in the windows early bar-tracery; the south wall has an inserted

window with flowing tracery of the Decorated period; the clerestory is Perpendicular; in the Old Parsonage to the north are windows of the Jacobean age, and in Black Hall, to the east, those of late Stuart times, while the Judge's Lodging next door, built as the Town House of Sarah Duchess of Marlborough, has the sashed windows of the eighteenth century.

A tour of Christ Church would enable the student to discriminate easily and rapidly between the mouldings in fashion at various periods. Such a knowledge of the contours of the rounds and hollows cut on the face of the stone for the play of light and shade is essential in determining the date; for mouldings were everywhere unvarying in their contours in their several periods. Thus in the ribs of the vaults of the choir aisles in the Cathedral may be seen the heavy semi-cylindrical roll of the early twelfth century, in those of the nave aisles the pear-shaped, keel moulding equally characteristic of the second half of it; the arch mouldings and bases in the Lady Chapel show the deep, dark hollows of the thirteenth century, while those of the caps in the Latin Chapel and the arches of St. Frideswide's Shrine have the quarter round which distinguishes the work of the Decorated period. The caps and ribs in the Cloister well illustrate the angular mouldings of the Perpendicular style, and their square and lifeless foliage should be compared with the vigorous leaves on the caps of the Lady Chapel and the life-like leafage of St. Frideswide's Shrine.

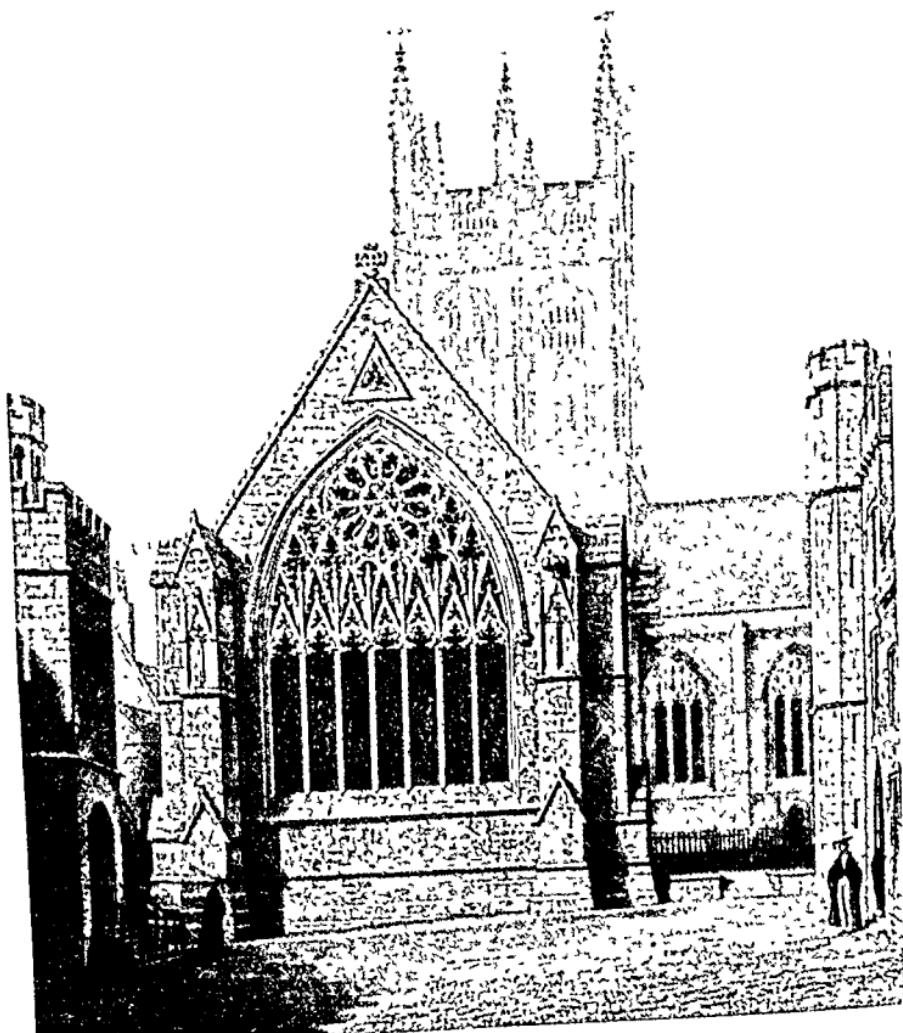
Here, too, the progress of vaulting can be followed step by step. The Slype, in the Cloisters, is ceiled with an early Norman barrel vault, the simplest of all forms; the choir aisles show cross-vaults carried on semicircular arches; in the vaults of the nave aisles the pointed arch appears with graceful and lightening effect. In the vault of the Lady Chapel the round arch is finally abandoned; the fourteenth-century vault of the Latin Chapel shows additional ribs, and particularly the introduction of ridge-ribs; while in the vault of the cloisters may be seen lierne ribs, short cross pieces from

rib to rib, reducing the size of the areas to be filled and strengthening the framework. The great vault of the Choir, c. 1500, illustrates the ultimate achievement to which centuries of progress had been leading. Finally in the fan-vault of the Hall staircase can be seen the alternative solution, in which the weight—and consequently the thrust—of the vault is reduced to the absolute minimum.

A very little study in such advantageous circumstances will equip the intelligent observer with the necessary knowledge to recognize the styles and dates of the various college buildings. He will find traces of a thirteenth-century hospital at Magdalen and a mid-fourteenth century quadrangle at Merton. New College Gateway, Hall, and Chapel with the Cloisters and Tower are authentic work of the last quarter of the fourteenth century. Lincoln Gateway and part of the front quadrangle with the Hall, St. John's Gateway, All Souls front quad and Chapel, Magdalen Towers, Hall, Chapel, and Cloisters are substantially fifteenth-century work. The front quadrangles of Brasenose, Corpus, and St. John's are of the early sixteenth century with some additions. There are vestiges of medieval work in the Libraries at Balliol and Pembroke, and in the Buttery and Common Room at Trinity. For the rest the college buildings are of the Early (English) and Late (Italian) Renaissance and the modern periods.

The churches of the city, as we have seen, show a greater variety of styles, and those of the surrounding district will be found of equal interest.

Until almost within living memory Oxford remained in appearance a medieval city. As you approached it from Iffley or Cowley you passed no houses until you reached Magdalen Bridge. The green fields came down to the river on the one side, and on the other were the grey walls of Merton and Magdalen. Something of the effect can still be gained by those who approach Abingdon from the Culham side where the marsh-land of Andersey has made building impossible. But Oxford had, and still keeps, an advantage



12. MERTON COLLEGE CHAPEL FROM THE EAST
From Ingram's MEMORIALS

possessed by no other medieval city in the wealth of garden ground in which her buildings are set.

It is, for the most part, a legacy of monasticism. Besides the Priory of St. Frideswide there were many religious houses within the city which served as hostels for young monks and friars of the various orders who were sent here to have the benefit of University teaching. Thus novices from Durham came south to a college on the site of Trinity, those from St. Albans and the Gloucestershire abbeys of Winchcombe and Tewkesbury came to Gloucester College, which now is Worcester; Archbishop Chichele had founded St. Bernard's College, which is now St. John's, for novices from the Cistercian abbeys; the Augustinian Friars had a house where Wadham now stands; and various orders of friars had settlements near the East Gate, and in the area between the Castle and Grandpont. The need for privacy and exercise made a certain amount of garden ground an essential adjunct to each of these foundations; and in some of them e.g. Gloucester College, St. Bernard's, Durham, and the Austin Friary the area was considerable.

At the Dissolution a large part of this ground was secured by the founders of colleges. Thus Wolsey obtained the two meadows known as St. Frideswide's and Stockwell Meads; the last had been given to St. Frideswide's by Lady Elizabeth Montacute in 1346 to found a chantry. He laid out the Broad Walk, banking it with waste stone from his works, and used it as a road to the timber bridge which he threw across the Cherwell at Milham to bring stone and lime from pits at Headington and Beckley, and timber from Shotover. It must have been almost obliterated when 'the Medow was, during the time that Oxford was a *Garrison for the King*, very much turfed and digged, and had several Bulworks made upon it, and the Rivers of Charwell and Thames were by His Majesties soildiers turned in upon it and lay all over it, the better to keep the enemy from the garrison; by reason of which it was altogether spoiled and did bear nothing but Flags and Sedge and did become marshy ground'. It was

reclaimed after the Restoration by the college tenant, one Adkins, and Fell then stepped in, evicted him, and remade the Walk, paving it with the stone chippings from the masonry of his new buildings completing Tom Quad. It was therefore known as the White Walk which was corrupted first into Wide and then into Broad. Of the elms with which he lined it in the last years of Charles II, many survived until the present century. The last of them came down in the great gale of November 1928. They were contemporary with the elms of Ne Plus Ultra Walk, in front of Keble, of which Wood records the planting in 1689, and with those that stood in front of St. Swithin's buildings until the College took them down as dangerous a few years ago.

St. John's not only inherited the garden of St. Bernard's college but was provided with an additional four acres purchased by the founder from Dr. George Owen, Henry VIII's physician, who had secured them as part of the spoil of Godstow. Their boundary wall was built, like the Old Library, with stone, bought of Edmund Powell of Sandford, from the ruined buildings of the Carmelite priory on the site of Beaumont Palace in which Cœur de Lion had been born. It was through the gate in this wall into the gardens that Laud's body was brought home to his chapel for burial after the Restoration, coming from London by Magdalen Bridge, Cat Street, and Parks Road, then known as Beaumont Street as leading to Beaumont fields, the site of North Oxford.

The site of the House of Austin Friars was large enough for them to hold an annual fair. After passing through several hands it had come into the possession of the city, when in 1610 Dorothy Wadham sought to buy it to build her husband's college. Pressure from the King and the Chancellor, Ellesmere, forced the Corporation to sell at less than cost. The original buildings had a southern frontage on Holywell, and included the site of the Music Room, built in 1742. In our own day the college has similarly parted with its northern frontage for the benefit of the Rhodes Trust. The beauty of the Rhodes Building goes far to justify the encroachment.

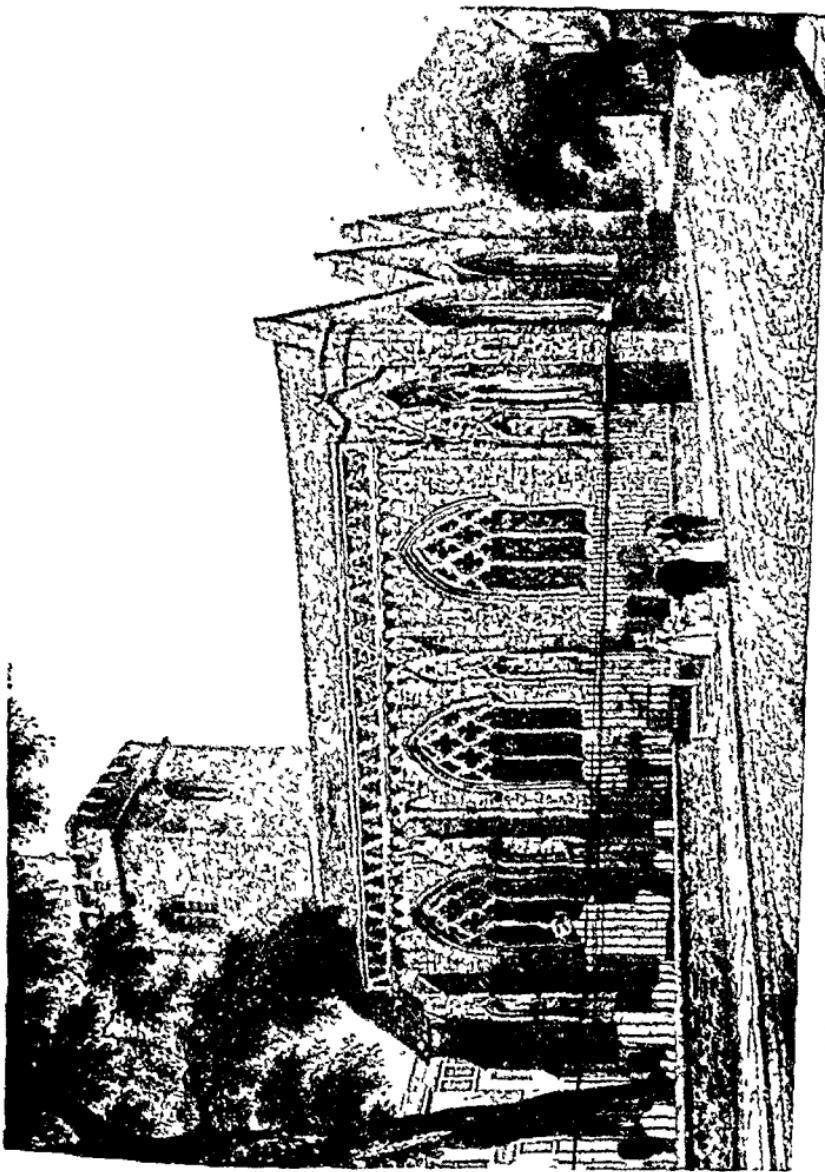
New College owes its ample area mainly to the depopulation of the City following the Black Death; for when the King's escheator 'on the Monday before the nativity of St. John Baptist, 2 Rich. II, A.D. 1379' summoned before him the Mayor and Bailiffs and twelve honest and lawful men to make inquisition whether it would be to the damage of the fee-farm of the town if William Bishop of Winchester built a college upon certain void plots, and a common lane, which he had acquired from various owners, the said jury delivered that 'the said common way or lane and plots of ground were . . . full of filth, dirt, and stinking carcases . . . and that also there was a concourse of malefactors, murderers, whores, and thieves to the great danger of the Town and danger of Scholars . . . and that all the said plots lay waste, and had been for a long time deserted from the inhabiting of any person'. Nevertheless these citizens made the bishop pay eighty pounds to include their 'common way or lane' within his boundary wall; it was a continuation of the present road to the college gate, and ran across the site of the quadrangle to the city wall.

Even at New College, however, a large part of the site had been monastic property, and particularly the garden area which Wykeham purchased from the Trinitarian Friars whose land was 'between Cro Well (at the corner of Long Wall and Holywell), and the East Gate of the Town'. This had been originally part of the pomerium, the military road along the line of the walls. As the danger of attack diminished, the road ceased to be important, and this section of it had been granted to the friars by the City Fathers. Their approach to it was from High Street, through the site of the Masonic Building; and when in 1914 this became a military hospital an entrance into New College Gardens was once more made after more than five centuries so that convalescents might take the air in them.

Of Magdalen one is tempted to say as Camden said of Britain, it is 'well known' to be the most flourishing and excellent, most renowned and famous Isle of the whole

world: so rich in commodities [from its garden on the Marston Road], so beautiful in situation, so resplendent in all glory, that if the most Omnipotent had fashioned the world like a ring, as he did like a globe, it might have been most worthily the only gem therein'. Its delectable site though not strictly monastic is a legacy from a pious foundation, the Hospital of St. John the Baptist, founded for the sick poor and for the entertainment of pilgrims to the shrine of St. Frideswide. The range of building between the tower and the lodge is said to have been the pilgrims' hostel, and the blocked doorway their entrance, though its form is not original for the outer wall has been rebuilt. The inner wall, however, is of the early thirteenth century, and has traces of lancet windows. The kitchen, too, may be that of the Hospital.

In the days of Richard I the site belonged to John and was conveyed by him to Hugh de Malannay for the endowment of the Hospital. When, in the mid-fifteenth century, Waynflete was planning his college he got the King's leave to acquire it from the Master and Brethren, agreeing to maintain them during their lives. Its boundaries, then, as now, were 'the river Cherwell on the East side, the way leading from the East Gate to the East Bridge on the south, the highway leading from the East Gate to Holywell, and Canditch (Broad Street) on the west, and certain lands of the Manor of Holywell on the north'. Of the famous Water Walks the south path along the Cherwell eastwards to King's Mill must have been even then in existence, for the mill had been given to the Hospital by King Henry III. The land adjoining it is now the kitchen-garden of the college, round which a vast bulwark has lately been built to screen it from the northern ; ds, so that the produce may come into season in time for the Summer Term. The path thence through Mesopotamia must also be early, for Parson's Pleasure, under the name of Patten's, was a bathing place in the seventeenth century, when also the river walks of the New Parks in the northern fields known as Beaumont were already in use. The area had been a pleasaunce and a recreation ground since the earlies



I3. ST. MARY MAGDALENE CHURCH, FROM THE SOUTH-EAST
From Ingram's MEMORIALS

days of the University. In 1642 the royal levies drilled in the New Parks, and were inspected there by the King.

Like Christ Church Meadow the Magdalen Water Walks were sadly disfigured by the defensive works of the Royal garrison. The trees on either side of the Cherwell were cut down so that an attacking force should have no cover. Antony Wood laments the 'pleasant meanders shadowed with trees there were before the Civil distemper broke forth, where students could not but with great delight accost the Muses'. But by Addison's time, 1689, all was in order again, and he could accost the Muses in the Walk named after him, along the northern branch of the river, and inspired by them produce hexameters in praise of the sphaeristerium, the bowling-green, which Magdalen, like every college in that age, maintained for the recreation of its members. New College kept its bowling-green, with its handsome pavilion in the south-east corner of the garden, until almost the middle of the last century. The green at Merton, in Wood's time and after, was under the west window of the chapel, where the path to Christ Church Meadow now runs.

The deer in Magdalen Grove no doubt descend from those brought from the Bishop of Winchester's park. As they are 'on the foundation' the college does not eat them. When venison is required it is obtained by exchange with the Bishop. Angel Meadow was so called from being attached to and leased with the Angel Inn, a coaching hostelry, which, with its stables occupied a large part of the site of the present Examination Schools.

Merton, like New College, and to some extent Exeter, being a pre-Reformation foundation, owes the best part of its garden to the enclosure of the pomerium, of which King Street forms the sole remaining vestige. At an early date the college obtained a lease from the city of the strip of land inside the wall of Dead Man's Walk; they were paying the medieval rent of fourpence a year for it in 1606 and by 1711 they had made upon it the 'handsome Terrass walk' which is now the most delightful part of the gardens. At that time they

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were a place of public resort, frequented by the University at large, and the better-dressed citizens; but in 1720 on the representations of the Proctors they were closed to the public. In the Civil War a cannon was planted on the northern bastion of the wall for the defence of Milham Bridge which was then still in existence. Until the foundation of Corpus, Merton had another garden on the other side of the college, which was alienated to give space for the new buildings.

Corpus obtained its gardens partly by purchase from Merton and partly by enclosing the lower end of Oriel Street. They are attractive not only for their fine views of Christ Church—their terrace is the only point from which the east end of the Cathedral can be easily seen, but from their associations with Charles I and Henrietta. When Oxford was the Royal head-quarters in 1642 the King lodged at Christ Church and the Queen at Merton. Doorways were then made in the boundary walls of Corpus so that by walking through the garden they might visit one another with ease and privacy.

The rest of the older colleges had much less garden ground. All Souls, for example, had but a small space until the Elizabethan warden, Hoveden, purchased the Rose Inn, and threw the site into the college. He was the first married warden, and his action reminds us that the wives of heads of houses had a good deal to do with the laying out and improvement of the college gardens. Antony Wood, an embittered bachelor, numbers among the ‘mischiefs that befel Merton College by having a married Warden thrust upon them’ that ‘the Warden’s garden must be alter’d, new trees planted, arbours made, rootes of choice flowers bought (which cost five shillings a roote) &c. All which tho unnecessary, yet the poor Coll. must pay for them, and all this to please a woman’. Earlier references to college gardens suggest that their purpose in the Middle Age was mainly utilitarian, to provide the college with fruit and herbs. At Lincoln, for example, the garden was known as ‘the Cooke’s’, and when the married rector was allowed to appropriate it in 1606 it was on condition of his supplying the college with ‘sufficient wholesome

and sweet herbes' when required. The new fashion was that which had already changed the gardens of private houses, e.g. Chastleton, symmetrical beds and grass plots, with paths geometrically arranged, yew and box-trees clipped into formal shapes, or scooped out to form arbours, all designed in sharp contrast with the unordered growth of nature and to emphasize man's growing sense of control over it, symbolizing the Tudor régime of law and order and centralized government. A central 'mount' round which paths were laid out, like an intricate proposition of Euclid, was almost universal; Loggan's drawings of 1673 show a typical example at Wadham, but the mount at New College is the only survivor. The gardens as they are to-day are a product of the Romantic Movement, like our modern Gothic buildings. They represent a 'return to nature' and reflect the sentiments of the Rousseauite lady in Lothair who 'could not bring herself to believe that they had gravel walks in the Garden of Eden.' Topiary art went out with the Classic Orders.

The Botanic Gardens alone remain to represent the ideals prevailing at the date of their layout; they have the geometrical pattern of plots and paths, the fountains, and the statues that in Tudor and Stuart times might have been found in every college garden. The yews that overhang the turning gate leading to the Meadow were once trimmed into the shape of giants guarding the entrance but they were allowed to return to nature a hundred years ago.

The site of the gardens had been the burial ground of the Jews of Oxford until their expulsion under Edward I. When the foundations for the boundary wall were dug in 1630, and again when bulwarks were thrown up for the defence of Magdalen Bridge in 1642, many skeletons were disinterred. The statues of Charles II and the founder, Lord Danby, were placed in the niches, hitherto empty like those in the front of Queen's, in the last years of the century.

The first gardener was Jacob Bobart, a native of Brunswick. He was famous not only for his botanical knowledge, but for his patriarchal beard. A waggish undergraduate once raised

the hue and cry on him, declaring 'he has eaten my horse, and there is its tail hanging out of his mouth!' His monument is on the south wall of St. Peter's Church.

Of Oxford, Camden's metaphor was once a literal truth: our fathers fashioned the city as a jewel in a ring, an opalescent stone in a circlet of green hills and blue waters. The jewel is still there, its lustre dulled a little but still incomparable. But its setting! The high hills are a refuge alike for the University don and the city shopkeeper who have crowned them with their brick-built villas; the green pastures have been overbuilt with municipal dwellings in the interest of the local factories; the pylons of electrical purveyors bestride the valleys like Mr. Wells's Martians; in the highways the prophecy is fulfilled: 'the chariots rage in the streets; they jostle one against another in the broad ways; they run like the lightning'—and woe to him who cannot emulate them.

Note. A short account of the Oxford Preservation Trust will be found at the end of Pt. I.

THE CONSTITUTION OF THE UNIVERSITY¹

By J. L. BRIERLY and H. V. HODSON

§ *Introduction*

THE government of the University of Oxford cannot be understood apart from its history, and readers of this chapter will have to refer at many points to a previous one. From the vicissitudes of its past there have emerged two cardinal factors in the constitution of the University. The first is its nature as a self-governing corporation; at the present time, it is true, effective authority is in the hands, not of the whole body of Masters of Arts and holders of higher degrees, but of such of them as are actually teachers and administrators in the University, while the Statutes have been sanctioned (certain of them imposed) by Parliament, and some of them can only be amended with the consent of the Privy Council; nevertheless, it is still true to say that the whole university, regarded as a body of graduates, is virtually master of its own affairs. In this, Oxford is quite different from, say, the University of London or the modern English universities, governed as they are by mixed bodies of teachers and nominees of outside authorities, and from the typical American university with its permanent president and its governing board of business men and politicians.

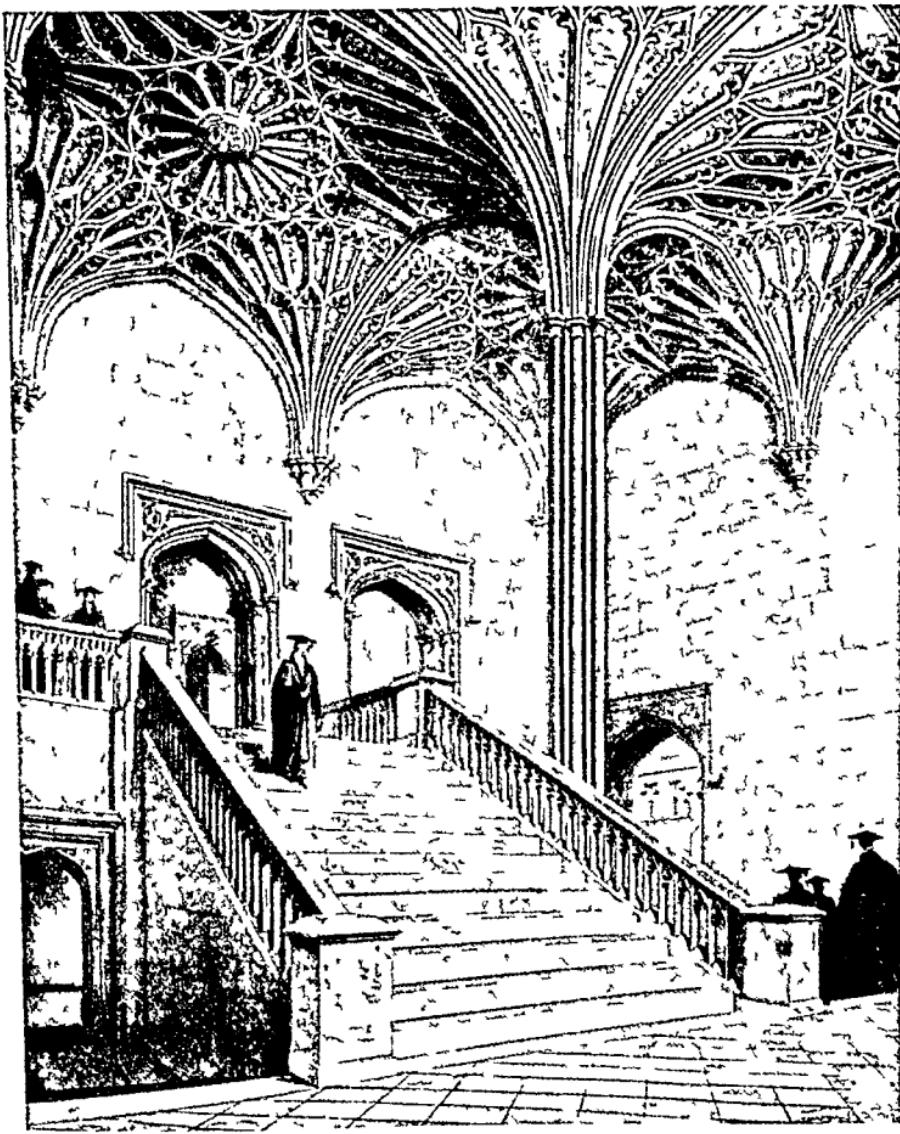
The second fundamental fact is that the colleges are, with slight qualifications, severally autonomous. From time to time the relative powers of the University as a whole and of the colleges of which it is composed have varied greatly, but the University has never dictated how the colleges should be internally governed, while they have never altogether severed their external relations with the University. The University

¹ Much of this chapter has been summarized, and occasionally even transcribed, from *The Government of Oxford* published by the Oxford University Press (1931, 3s. 6d.), to which the reader may refer for further information.

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is not a federation of the colleges, it is the colleges. Apart from them, it is only an empty conception and a row of monuments, and so long as the constituent colleges possess such fundamental prerogatives as the exclusive right to admit to membership of the University, and so long as they provide the tutorial teaching that is the pride of Oxford and Cambridge, no imposed change in the constitution of the University could radically alter the character of the place as a collection of free institutions. The following description of the government of the University must be read in the light of that peculiarity and of the fact that what would correspond to the executive and administrative functions in a political constitution are largely exercised in Oxford by the independent colleges.

It will be well to begin with a brief summary. The general body of Masters of Arts and holders of certain of the higher degrees is called Convocation. It receives certain reports; it elects the Chancellor; and it possesses a suspensory veto where a measure has been passed by Congregation with a majority of less than two-thirds. Congregation, which is the effective governing body, comprises such members of Convocation as are teachers or administrators in the University. Every enactment, whether general or particular, and most appointments to administrative offices, have to be approved by Congregation; reports and accounts are submitted to it; it elects members to the chief financial and executive committees in the University, and in particular it elects eighteen members to the Hebdomadal Council, which is, roughly speaking, the Cabinet of this Parliament. Besides the elected eighteen (and the Chancellor, who is nominally chairman but never attends) there are four official members of the Council—namely, the Vice-Chancellor, who is chairman, an ex- or pro-Vice-Chancellor, and the two Proctors. Every measure presented to Congregation has to be initiated by the Council, though the primary impulse may come from some other body or individual. The Council is the main ganglion of the system, through which stimuli in the form of private



I4 THE GREAT STAIRCASE AT CHRIST CHURCH
From Ingram's MEMORIALS

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suggestions, resolutions of boards or committees, petitions from members of Congregation, applications from individual members or prospective members of the University, &c., are translated into legislation. The statutory functions of Council, with certain minor exceptions, are not, properly speaking, executive, but deliberative and advisory; but by a custom which may be regarded as a binding convention of the University constitution the advice of the Council is accepted by the Vice-Chancellor in all major matters in which he acts for the University. But in general it is true to say that the constitution of the University is legislative rather than administrative in the sense that it does not follow the normal governmental practice of legislating in general terms and of delegating to a separate branch of the constitution the administration of the laws. The administration is conducted by committees and by a few paid officers—the chief of them being the Registrar and his assistant, the Secretary of Faculties, and the Secretary to the Curators of the Chest. The latter body, of whom some are members by virtue of their offices, while some are elected by Council and by Congregation, and some are appointed, has somewhat larger executive functions than the Council, since the financial affairs of the University are conducted under its authority. It has no right of legislative initiation, but it must be consulted by Council on the financial aspect of any change contemplated by that body, and may push its advice to the length of insisting on a joint conference which has power to decide a difference of opinion between the two bodies. The division of responsibility between Council and the Curators of the Chest is one of the most striking features of the government of Oxford.

The teaching affairs of the University have likewise separate governmental institutions. Boards of Faculties, and above them a General Board, have power to make regulations and to appoint junior teachers within the limits set by statute or decree; boards of electors choose professors and a few other university teachers. Further aspects of the University's work—extra-mural teaching, special subjects,

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buildings and institutions—have their separate regulatory and administrative committees, co-ordinated through possessing, in regard to policy as opposed to administrative detail, a common secretariat under the University Registrar, through having the Vice-Chancellor and the Proctors as *ex-officio* members, and through the necessity of referring all changes that involve modification of statutes or decrees to Council and thence to Congregation. It is largely by his chairmanship of all these committees and boards that the Vice-Chancellor is able to wield an exceptional authority. He is appointed not by election but by rotation among the Heads of the Colleges, he holds office for only three years, and though, as its effective head, he represents the University to the outside world, his influence over its internal affairs is indirect rather than statutory. The authority of the Chancellor, the titular head of the University, is even more distant. He does not interfere with current affairs, and his public appearances are rare and formal, but his advice has sometimes been of critical value when opinion in the University has been divided. The two Proctors, who are elected by the several colleges in fixed rotation, are possessed of executive powers, especially in the matter of discipline, as well as an important position in the legislative machinery, but again they hold office for one year only.

§ The Legislative Structure

The government of the University has been described as legislative rather than administrative. Broadly speaking, general legislation is embodied in statutes, temporary or particular legislation in decrees, but this division is somewhat unreal since important and controversial issues often fall to be presented in the form of decrees. With two exceptions the initiation of a statute or decree is the statutory prerogative of Council, and a member of Council introduces the measure in Congregation; but Council need not be unanimous in deciding to promulgate a statute or decree, and its members may oppose measures in Congregation despite the fact that

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Council as a whole has initiated them. The exceptions to this procedure are that, in matters within the sphere of the General Board of the Faculties, a measure initiated by the General Board may be introduced by a member of either body; and that occasionally the introduction of a statute is preceded by the presentation by Council to Congregation of resolutions, on the basis of which, if approved, a statute is drafted by a joint committee of Council and Congregation, and introduced in Congregation by a member of the committee.

A statute always, and occasionally, if Council thinks the matter of sufficient importance, a decree, contains a preamble stating shortly the principle of the measure. The preamble is submitted separately to the House; if it is passed the enacting clauses are submitted later. The clauses of a statute, but not those of a decree, may be amended by the House within the terms of the preamble, and clauses may be deleted or added. When a statute has been amended, every clause in which an amendment has been made is submitted to Congregation as finally amended, and the statute is then submitted as a whole for acceptance or rejection. If the majority of Congregation in favour of any statute, or of a decree which contains a preamble, is less than two-thirds, it must be submitted to Convocation; but the latter has only a suspensory veto, and a measure which it rejects may be reintroduced into Congregation between one and two years later, and if then accepted will come into effect.

On ordinary occasions—and the greater part of current university business has a routine character—Convocation differs little in personnel from Congregation, the business of either body is only occasionally controversial, and unless it is so only a handful of resident members of the University attend. Membership of Congregation is confined to such members of Convocation as are actually engaged in teaching at Oxford, or in university or college government, and it may be briefly described as the body of resident teachers. Convocation is composed of masters of arts, and doctors of divinity, medicine, or civil law, who have paid all university dues and

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have kept their names on their college books. Women are admitted on the same conditions as men.¹

During the last half-century or so, the powers of Convocation have been progressively limited. It has, however, retained the right to elect the Chancellor and to confer honorary degrees and degrees by diploma. Beyond that, its most important right is that of temporary veto upon statutes under the conditions recounted above. The actual legislative and supervisory power in the University rests with Congregation, though the only way in which the latter can initiate measures is for at least 100 of its members to present a petition to Council, and that right depends on a standing order of the Council which might conceivably not be renewed. However, Congregation elects eighteen of the twenty-three members of the Council, and three of the twelve Curators of the Chest; its approval is required for the election of the three chief university officers, the Registrar, the Secretary of Faculties, and the Secretary to the Curators of the Chest. Congregation has also power, which it seldom exercises, to address questions to such university boards of curators and other bodies as are compelled to present annual reports to it, and it is required to approve the annual financial statement prepared by the Curators of the Chest.

The Hebdomadal Council comprises eighteen elected members (who need not be members of Congregation, though in practice they are), the Chancellor (who normally does not attend at all), the Vice-Chancellor (who is chairman in the Chancellor's absence), the two Proctors, and, for a year from his vacating office, the last Vice-Chancellor, or thereafter one of the pro-Vice-Chancellors appointed by the Chancellor. The Chancellor is elected for life by Convocation, the office being largely honorific and awarded to one of the University's sons most notable in public life. The Vice-Chancellor is appointed annually, according to the letter of the Statutes, by the Chancellor without restriction of choice, but in actual

¹ For information on the position of women in the University, see pp. 39-44.

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practice the Heads of Colleges hold the office in rotation, according to seniority as Heads, usually for three years at a time. The Royal Commission of 1921–2 recommended that the rotational system 'should not be the decisive element when weighed against other considerations of greater importance', and that 'rotation of Colleges should be taken into account as well as rotation in order of seniority of Heads', but the rotational system has so far continued unimpaired. Besides being Chairman of the Council, of the Board of Curators of the Chest, and of all the chief boards, committees, and delegacies, the Vice-Chancellor can veto a statute or decree, though he does so only on rare occasions in order to prevent legislative errors, and he has statutory powers to rule as to their interpretation. He is not provided by the University with a residence or a secretariat. The two Proctors, besides being in charge of discipline, are associated with the Vice-Chancellor as official members of the various boards and committees as well as of Council, and by tradition represent the general interest thereon. They are elected autonomously by the several colleges in a fixed cycle, for a term of one year. The eighteen remaining members of the Council are elected, six at a time at intervals of two years, to hold office for six years; they are, however, then re-eligible. Not more than three of them may at any time be members of the same college.

The business of Council covers the whole field of university affairs, and varies from trivial matters such as the terms of admission to the University of some particular student to vital questions of principle. It is largely organized by means of *ad hoc* or standing committees, which investigate each question in detail and report to the Council for decision. Besides its key power of legislative initiation, the Council has valuable rights of appointment to the various committees, including boards of electors to university teaching posts, and it also nominates the Registrar, subject to the approval of Congregation.

§ *Finance*

Each particular aspect of university life is supervised by a committee of some kind. In particular, finance is under the authority of the Curators of the University Chest (or financial board). They are the Vice-Chancellor and the Proctors, two nominees of the Chancellor (who may thus, if he thinks fit, introduce a non-academic element), a member of Convocation elected by Council, three members of Council, and three members of Congregation elected by those bodies. It will be observed that, by contrast with American or modern English universities, finance is in charge not of a technical committee but of a body predominantly drawn from among resident members of the University; further that although at least half the members of the board must be members of Council there may arise conflicts between the two authorities, for which contingency a special process of joint conference has been provided.

The Curators of the Chest collect the revenues and pay the administrative expenses of the University; they have charge of its public buildings, estates, and other property, except whatever is specially provided for. They advise Council and other bodies on financial matters and prepare financial statements, returns, and reports, some of which are required of them by the Treasury as a condition of the subsidy that Oxford, like every other British university, receives from the State. An application by some university body for specific expenditure is made in the first place to the Hebdomadal Council, but has to be referred to the Curators of the Chest, whose sanction is likewise necessary for schemes contemplated by the Council itself. The Curators have also to prepare for Council an annual budget forecast. They appoint their Secretary, subject to the approval of Congregation.

In considering the finances of the University it is well to bear in mind that the combined revenue of the various colleges is approximately double that of the University as

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a separate entity, excluding college contributions which would otherwise be counted twice.

The university authorities have no power to direct how a college should spend its income, but the colleges have to present their accounts in a prescribed form and are taxed for university purposes. The tax is graduated and is levied on net income defined according to a complicated formula, the average rate being about 12 per cent.

As the University collects only a few special tuition fees, the levy on the colleges may be regarded as a composition charge for teaching services rendered. The fact that the levy is in part discharged by payments to professors lends point to that suggestion, but in fact college contributions cover scarcely one-third of the cost of university teaching and research, apart from the upkeep of institutions. They amount, at the period of writing, to approximately 15 per cent. of total university revenues; about 33 per cent. is provided by various public authorities, including the national Treasury; 15 per cent. from endowments, donations, and subscriptions; 25 per cent. from fees for degrees, examinations, and matriculation; and the remainder from local examinations and other sources. On the opposite side of the ledger, something less than one half of the expenditure is incurred for teaching and research, and 30 per cent. on departments, laboratories, &c., and the upkeep of premises; administration costs less than 5 per cent. of total payments, the rest being absorbed by pensions, scholarships, examinations, extra-mural teaching, and so on.

§ Teaching and Research

The governmental machinery is, according to the Oxford conception of a university, incidental to the teaching and research carried on there. Another chapter¹ of this book describes the tutorial system, which is perhaps Oxford's most important contribution to educational practice, and still another describes the courses and subjects that the

¹ Pages 125 et seq.

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teaching covers.¹ Here we are concerned only with the governmental and administrative institutions whereby teaching and research are organized. Practically all the tutorial teaching, and a large part of the lecturing, are provided by the individual colleges, who act entirely autonomously in choosing tutors and the subjects that they teach, within the limits set by custom, college statutes, the syllabuses laid down by the University, and the obligation to consult the Faculty Board concerned before making any appointment. Tuition fees are paid by each student to his college, in return for which the college provides the undergraduate with such tutorial teaching as he may require. For laboratories and for scientific and mechanical courses generally, as well as for a few special lectures in other subjects, extra fees have to be paid; this is usually arranged through the college authorities and not by the individual student. Occasionally, especially in the smaller colleges and the women's colleges, it may be necessary for an undergraduate or research worker to go to a tutor in another college for tuition or supervision; this is commonly done on the basis of exchange of pupils or similar arrangement between the college authorities. Sometimes tutors without an official college position are employed to supplement the teaching that the colleges can offer, and it is of course open to students to make their own arrangements, if they choose, in addition to those made for them by their colleges.

The tutorial system has no special governmental institutions. Lectures, however, are provided in the first place by university professors, readers, and full-time lecturers, each of whom holds his post under conditions which include the delivering of lecture courses; in the second place by college teachers who are paid special fees by the University and are given the title of university lecturers, though the greater part of their time is still occupied by teaching in their own colleges; and lastly by college tutors upon whom the University can put no pressure but who, under the direction of their several colleges, freely contribute to the common pool

¹ Pages 133 et seq.

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of lectures. Thus an undergraduate's morning may be spent at the feet in turn of Professor X at the Examination Schools, Mr. Y—a junior tutor—at A college, Mr. Z—a lecturer appointed by the University—at B college, and his own tutor lecturing in his own college hall to an audience drawn from all over the University and possibly from beyond. But he is almost certainly unconscious of any constitutional difference; the lectures are chosen for him or by him, according to their probable merits, from a list submitted at the beginning of each term by the Faculty in which he is reading.

There are eleven faculties,¹ each composed of the teachers in the subject or subjects of the faculty. The faculties criticize, though they are not empowered to settle finally, the proposed lecture lists in their subjects for each term. The decision lies with the boards of the faculties, each of which comprises the professors and readers in the subjects of the faculty, up to the number of eight (eight being selected by the faculty if a greater number is available), and an equal number of members of the faculty elected by the same (the professors not voting), to hold office for two years, after which they may, however, be re-elected. A board may co-opt three additional members. This combination of official, co-opted, and elected members is typical of the committees whereby Oxford governs herself.

Besides settling the lists of lectures, with an eye to covering all parts of the syllabus with a minimum of overlapping (though it must be remembered that they cannot coerce college tutors), the boards of the faculties appoint university lecturers and make recommendations for the appointment of such university readers as are not elected by special boards; they appoint members of the boards of electors to the professorships and readerships in their respective faculties; they consider representations from their faculties,

¹ Theology, Law, Medicine, Literae Humaniores, Modern History, English Language and Literature, Medieval and Modern European Languages and Literature, Oriental Languages and Literature, Physical Sciences including Mathematics, Biological Sciences, and Social Studies.

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sub-faculties, departments or boards of examiners, on the basis of which, and on their own initiative, they may report to the General Board of the Faculties; and in general they supervise the teaching available in their several faculties.

The General Board of the Faculties consists of the Vice-Chancellor and the two Proctors, two members of Council elected by Council, one member of Convocation elected by Council subject to the approval of Congregation, three persons elected by the Faculties of Science (voting together) and six by the Faculties of the Humanities (voting together) in either case from among their own members. Elected members hold office for three years. The General Board is charged as one of its chief functions with the co-ordination and supervision of the work of the several Boards of Faculties. It receives and makes proposals for the provision of facilities for advanced work and research, and the maintenance of an adequate staff in all subjects; and it frames statutes and decrees on these matters for consideration by Council and the University. The Statutes lay upon the General Board certain further special duties in the same connexion, including the transmission to the Council of any reports of the Boards of Faculties, with comments and recommendations, the appointment of most University readers, the advising of Council upon the regulations concerning the salaries of teachers, laboratory finances, duties of professors, &c.; and it is comprehensively authorized 'to exercise a general supervision over the studies and examinations of the University'.

The professors hold a special position both in these governmental institutions and in the actual work of teaching and of research. They are the principal means whereby the university, as distinct from the colleges that compose it, teaches and directs study. They are often *ex officio* members of a number of boards and committees. But in recent years the special status of professors has become somewhat less marked (for instance by the removal of the obligation upon Congregation to elect a certain minimum number of them to Council), and

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an endeavour has been made to assimilate them into the college system by providing that each of them shall be by virtue of his office a fellow of a specified college. Those of the scientific professors who are in charge of departments are in an exceptional position. In the organization of their laboratories or museums, and in the general management of their departments, these professors hold undisputed sway. Otherwise, the professoriate at Oxford is a body of teachers distinguished from the rest chiefly by the title of their office, the method of their election, and in some measure by the kind of teaching that they give.

Professors (other than the Regius Professors) are elected each by a special electoral Board, composed, as a rule, of the Vice-Chancellor, the Head of the college to which the professorship is attached and another member appointed by that college, a person nominated by the Hebdomadal Council and others by the Boards of Faculties concerned, and occasionally one or two outside persons. The professors do not ordinarily give tutorial teaching though they may voluntarily open small seminar classes or informal discussions. Their statutory duties include original work by the professors themselves, and the general supervision of research and advanced work in their subjects or departments. Every professor must give to students assistance in their studies by advice, informal instruction, examination or otherwise. Professors are divided into three categories according to the conditions laid down for lecturing and residence; a 'Schedule A' professor, for instance, has to reside within the university radius for six months during the academic year and lecture or hold classes every term; he has to give or hold not less than thirty-six lectures or classes in each year, of which not less than twenty-eight shall be lectures; and in two of the three terms he must lecture or hold classes at least twice a week for six weeks.

A few special readerships are filled in the same way as professorships and with similar conditions. The General Board of the Faculties may also from time to time appoint such readers as it may think fit, subject to the approval of

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Congregation. The separate boards of faculties have power to appoint to the status and title of university lecturers any recognized teachers in their faculties, as and when they may think fit, subject to the approval of the General Board and of Congregation. Although certain restrictions are placed on their total of teaching hours, these university lecturers do not cease to be college tutors. Similarly the scientific faculty boards may appoint university demonstrators, but many if not most of these hold no college teaching position. A series of statutes lays down the rights and duties of the several classes of university teachers.

§ Institutions and Committees

The functions of the University, as distinct from the colleges, are four-fold. First, to examine and to grant degrees, and for this purpose to lay down courses, syllabuses, and regulations, and to exercise a general supervision over the lectures and other methods of study. Second, to provide, through its professors and other teachers, its scientific departments and special research institutes, such teaching and guidance as the colleges cannot or do not customarily offer. Third, to maintain discipline and order, to represent the assembly of colleges in relation to outside authorities or persons, to collect and distribute central finances, to extend the activities of the University beyond its local habitation, and to lay down the general conditions under which colleges and halls may be created, and they and their members conduct their life. Fourth, to create and maintain such institutions as libraries, laboratories, museums, parks, a printing press, and so on, which it would be wasteful or otherwise improper for the several colleges to maintain.

These functions are discharged, apart from the machinery described in the preceding section, by a number of committees with varying constitutions and titles. These committees are the constitutional link between the legislative constitution and every day affairs. They generally comprise appointed members, members who sit by virtue of their

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offices, and others chosen by direct or indirect election. They are linked with each other and with Council and Congregation by the elective process, by the presence in each of them of the Vice-Chancellor and the Proctors, and by some degree of co-ordination of their secretariats through the Registrar of the University. Recently a sharp contradiction between the policies of two of the most important committees drew attention to the need for reform, and the Statutes were amended to provide that the Registrar shall receive copies of all papers (in particular, copies of the minutes) ordinarily circulated to practically all committees; he is also entitled to attend the meetings of any of these bodies, and to ask the secretary of any of them to furnish him with information upon any point which has been or is under consideration by the body in question. The efficacy of this measure in ensuring a co-ordination of policy obviously depends on the liberation of the registrar from much of the routine work of keeping lists and files which according to the Statutes might seem to be his principal task.

The Registrar, who is nominated by the Hebdomadal Council subject to the approval of Congregation, is aided by an assistant registrar appointed by Council after consultation with him, and if the consent of Congregation is obtained he may also be provided, from time to time, with other assistant officers. The assistant registrar is charged with attending such meetings as the Registrar, with the approval of the Vice-Chancellor, may direct, to prepare their business and to keep minutes of their proceedings. He is thus an important instrument for co-ordinating the work of the various committees. The Registrar himself is secretary of Council, Congregation, and Convocation, and he has to keep, besides their minutes and other papers, a large number of registers and records, and to see that the Statutes are regularly published. He is not secretary to the Vice-Chancellor, nor answerable to him, but to Council. Like the other chief permanent officers (the Secretary of Faculties and the Secretary to the Curators of the Chest), he is subject to a statutory retiring age. He may,

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of course, be dismissed for serious misdemeanour. The Secretary of Faculties is nominated by the General Board, and the Secretary to the Chest by the Curators, in each case subject to the approval of Congregation. The Secretary of Faculties is secretary both of the General Board and of the several boards of faculties, while the Secretary to the Chest has to keep the university accounts as well as the records of the meetings of the Curators.

By virtue of their detailed knowledge and the permanence of their tenure of office, these officials can do much to mould and like authorities. Some of these have their own part-time or unpaid secretaries; for instance, the secretary to the Visitors of the Ashmolean Museum is the Keeper. These secretaries may themselves be highly influential in their own territory.

The principal university institutions are the Bodleian Library, the University Press, the University (science) Museum, the Ashmolean (art and archaeology) Museum, the Taylor Institution (modern languages), the Sheldonian Theatre, the University Park, the Botanic Garden, and the Observatory. Each of these is managed under the authority of a committee, usually called a board of curators, varying in number from three (Botanic Garden) to sixteen (Ashmolean Museum). The Curators of the Bodleian Library, for instance, number fifteen, namely the Vice-Chancellor, the Proctors or their deputies, the Regius Professors of Divinity, Civil Law, Medicine, Hebrew, and Greek, and seven resident members of Congregation, elected by that House and holding office for ten years. The Curators are entrusted with the general control of the affairs of the library, including the appointment of a librarian and other officers, and are solely responsible for the expenditure of all sums accruing to them through the University Chest or otherwise. In particular, they are entitled, without consulting Council or the Curators of the Chest, to receive and apply gifts of money, books, or other things, subject only to the duty of laying before Congregation

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annually a printed report on the general state of the library and its finances. Other delegacies and boards of curators or visitors are similarly constituted and generally have likewise the duty of laying reports before Convocation or Congregation.

The University possesses, in addition to the institutions already mentioned, a number of laboratories—electrical, physiological, chemical, pathological, &c. These are not managed by committees but are placed by statute under the charge of the professors at the head of the several departments concerned, subject to the financial and legislative control of the Curators of the Chest, and of Council and Congregation. There are also several institutions for research and specialized study along lines unsuited to college organization—rural economy, forestry, Indian studies, geography—each of which is controlled by a committee with, sometimes, a director nominated by them. Certain other special branches of university study—military instruction, oriental studies, studies for the Indian Civil Service, advanced studies, economics and political science, anthropology, classical archaeology, fine arts and comparative philology, are similarly supervised by committees, partly official and partly elected or nominated. Other aspects of university life having this type of organization include police, home students (women), non-collegiate students (men), known as St. Catherine's Society, local examinations, inspection and examination of schools, extra-mural studies, training of teachers, lodgings, appointments, scholarships.

From the nature of the tasks that they have to perform, some of these committees meet very rarely, and their work does not occupy much of the time of their members. Others are much more laborious, and represent a substantial impost upon the energies of teachers and administrators. 'The Delegates of the Press, for instance, whose formal meetings occupy perhaps an hour a week habitually devote much more than this time to preparation, to informal discussion, and to the work of the Delegacy generally.' Upon the chairmen

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or vice-chairmen especially (the Vice-Chancellor being always chairman when he is present) much detailed work devolves. The burden upon a limited number of individuals is all the greater in that a few persons, many of them members of Council, whose work is particularly onerous, belong each to a considerable number of committees, while other teachers in the University take little or no part in these governmental labours. Fortunately, some of the most heavily burdened members are heads of houses, who, although they may very likely have been teachers before their election as heads, have customarily relinquished most of their teaching work. Still, the system of self-government in force at Oxford—by contrast with American or most Continental or modern English universities—undoubtedly lays a considerable and perhaps excessive weight of administrative function upon those whose primary duty it is to teach or to direct and undertake research.

§ The Colleges and the University

The undergraduates of Oxford have no share in its governmental institutions; apart from them, the system may be described as fully democratic and partly representative. The representatives, it should be added, are unprofessional and unpaid, and, like political communities in the same pass, Oxford is coming to rely more and more on its professional administrators—the directors of institutions, the Registrar and other secretaries. The several colleges, on the other hand, are still small enough to be direct democracies. Like those of the University itself, their rights are granted by Act of Parliament and they cannot amend their statutes without the consent of the Privy Council, while their endowments, much of which still takes the form of landed property, are subject to control, as to disposal, transfer, and acquisition, by the Ministry of Agriculture; moreover, the colleges cannot make amendments in their statutes affecting the University without the consent of the University, which is likewise obliged to secure the consent of any college affected by a pro-

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posed change in the University Statutes, except a statute relating to college contributions to the Chest. But within these general limits the colleges are completely autonomous.

One or two of the colleges have exceptional constitutional features arising out of their peculiar history; Christ Church, for instance, is unlike the others in that its Head is Dean of the Cathedral and its governing body is composed of the Canons and Students (who correspond to Fellows in other colleges). The women's colleges also differ from the majority in that their governing bodies include persons not members of the respective colleges. But the general rule of the men's colleges is that the governing body is composed of Fellows, who, if they are not administrators such as bursars, are statutorily required to teach or to research. Most of the tutors and lecturers in a college will be Fellows, and so will the professors attached to the college. The chairman of the governing body is the Head of the College (Master, President, Warden, Principal, Provost, Rector) elected by the Fellows to hold office until he reaches the statutory retiring age of seventy years. The Fellows form a close corporation, save for the appointment of professors, having otherwise the independent and unchallenged right to choose new Fellows within the bounds set by their statutes. The Fellows are nowadays usually elected for a term of years, but except where, as at All Souls, special conditions apply, they are commonly re-elected. Each college chooses a dean, whose principal duties are to present members of his college for matriculation and degrees, and to maintain discipline within the college.

The colleges are entirely responsible for discipline within their walls, the University having no jurisdiction there. A college may without question or appeal dismiss a man for a term or for ever, and it would be very difficult indeed, though not statutorily impossible, for a man sent down from one college to find refuge in another. The colleges also possess the extremely important privilege of admission to the University. No candidate can be matriculated if he is not sponsored by a college, while the University accepts without veto

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all those put forward by the colleges, subject to the condition that candidates for matriculation (other than certain categories of senior students) must have passed or be exempt from Responsions, the University entrance examination. That statement is subject to the qualification that persons may be admitted to the University by St. Catherine's Society and by the Society of Home Students, which are themselves University bodies, but these non-residential societies are in most particulars becoming more and more closely assimilated to the colleges proper.

There are nineteen men's colleges¹, excluding Keble, which is in a special category of 'new foundations', and All Souls, which has no undergraduates; four women's colleges; and the two non-residential bodies already mentioned. One only of the ancient halls of the University remains—St. Edmund Hall—the remainder having disappeared altogether or been merged in the colleges; but there are a number of permanent private halls, created under a recent statute. St. Edmund Hall, although identical with the colleges in its collegiate life differs from them in constitution, as it is not a corporate society, but is governed by a Principal, its property being vested in a body of Trustees. For information upon the position of women in the University and upon collegiate life, regulations, and organization, the reader must turn to other chapters of this book.

All these bodies, colleges, halls, societies, together form the University, which apart from them and from its material institutions is no more than a name and an organization. The historical chapter has shown how the relative importance of colleges and university has varied enormously. At one time the University scarcely existed save as a giver of degrees to those whom the colleges put forward. Nowadays the development of scientific studies, demanding both resources and material which the separate colleges cannot provide, and the growing public and political interest in university affairs, have tended to enlarge the comparative im-

¹ See Pt. II. ch. VIII.

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portance of the University and to give it greater control over its constituent colleges. The colleges are heavily taxed by the University, and this reason alone would justify the obligation laid upon them to draw up their accounts in a prescribed form and to deliver them, properly audited, to the University Registrar for publication. The Curators of the Chest are empowered 'to review from time to time the published accounts of the several colleges, and, after communication with any college concerned, to report to the Hebdomadal Council thereon, with special reference to economy of administration and to any matter in which the interests of the university are directly or indirectly involved'. Rules governing the compilation of college accounts in the prescribed form are drawn up by a statutory committee of bursars, consisting of seven bursars elected by the estates bursars of the several colleges. There are special regulations regarding kitchen accounts, which have to be submitted to a firm of accountants, having special knowledge of catering business, nominated by a committee of domestic bursars. The accountant's reports on the individual accounts and on the catering administration are presented to the Curators of the Chest, who forward them with comments to the Hebdomadal Council, and at least the substance must be laid before Congregation. But so long as the college keeps within the terms of its own statutes and those of the University, it can only be advised, and not compelled, to adopt any financial reforms.

The University has even less control over the teaching activities of the colleges. They may or may not provide teaching in any subject laid down by the University for degree or diploma courses, as they please; and they may provide teaching in subjects outside the University syllabus. They may provide whatever form of teaching they choose, by whatever persons they choose, provided they consult with the Board of Faculty concerned before making any appointment. They may, indeed they all do, examine their members from time to time, and exact from them whatever standard of

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application or attainment they may think fit as a condition of continued residence. Thus a wide variety of standards and methods exists in Oxford, and the scope for educational experiment, coupled with the freedom of the candidate for entrance to the University to choose his college, and of the college to choose its entrants, is perhaps the most valuable feature of the collegiate system in its academic aspect.

COLLEGE LIFE

By CARLETON KEMP ALLEN

THE University of Oxford is an elusive, mystical body, not easily discernible to the casual glance. Not that it lacks reality: it is a multifarious and a highly complex administrative body: but to the average undergraduate it is little more than an abstraction—except when it makes certain concrete demands upon him in the shape of 'dues', examination fees, and similar levies. For the common purposes of academic life, the colleges *are* the University. There are twenty-one of them¹, together with St. Edmund Hall and St. Peter's Hall, and a body of non-collegiate undergraduates, now known as St. Catherine's Society. These are confined to men: there are four collegiate societies and one non-collegiate society for women. The relationship of the colleges to the University is unlike that which is found in any other academic constitution, except at Cambridge.

With a few exceptions, each college is a completely autonomous body, governed by its own statutes and by-laws, and responsible to nobody but its own corporators and their 'Visitor' for its internal administration and policy. By statute, each college, according to its resources (which vary greatly), has certain financial obligations to the central revenue of the University: any domestic legislation which it proposes is subject to scrutiny and caveat by the University, lest it conflict with general academic policy: and, needless to say, all regulations concerning degrees and examinations leading to them are governed by the University. Further, by concordat, there is a certain communism of public instruction, in as much as lectures delivered in one college, by members of its teaching-staff, are open to undergraduates of all other colleges. But otherwise, neither the University nor any other body except Parliament has the power to say yea or nay to anything of purely domestic concern which may seem good to

¹ See Pt. II. ch. VIII.

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the Governing Body (the Head and Fellows) of a college. It might be supposed that this degree of self-determination leads to embarrassing discrepancies, and in some respects the criticism would be justified. But the constitution, the methods and the customs of most colleges are very similar in all essential respects which concern the undergraduate's ordinary life, and the freshman, whatever his college may be, soon finds himself leading a typical 'Oxford' existence. This, of course, does not preclude the conviction that life in his own particular college has substantial advantages over life in any other college. Every college is thus far more characteristic than any other college of all that is best in Oxford: a state of things which gives universal satisfaction.

On the threshold of Oxford, the entrant is met by the paradox that it is possible to be a member of a college without being a member of the University (not that this ever happens), but it is impossible to be a member of the University without being a member of a college. The University will matriculate only those who are presented to it by one or other of the recognized Societies (a general term which includes colleges, halls, and non-collegiate bodies); and until the student is matriculated—which must be done at the very outset of his career—he cannot begin to qualify for any examination or degree. His first business, therefore, is to obtain admission to a college. His application (unless he has obtained a scholarship) is considered in competition with many others, and most colleges at the present time have far more applications than vacancies. Usually the applicant is required to pass a College Entrance Examination—a purely domestic concern, with which the University has nothing to do—in addition to Responsions (or an equivalent examination), which the University requires of all undergraduates, except certain specially exempted classes, before it will matriculate. An applicant, therefore, cannot be sure of obtaining admission to the college of his first choice, and if he is rejected, he must apply elsewhere. If he has a strong preference for any particular college, he will be wise to 'put his name down' as

early as possible, some (though not very great) importance being attached to priority of application. Most colleges complete or nearly complete their lists of freshmen for the Michaelmas Term not later than the preceding March or April, and in the more-sought-after colleges there is little chance of being accepted after that date. This is a point which is not sufficiently realized by overseas applicants. An overseas application made—as too often happens—a few weeks before the beginning of the academic year has little or no prospect of success.

The college, then, chooses the undergraduate, but the undergraduate also chooses the college. What should guide his preferences among so many famous institutions? Very often the question is settled by family, school, or other personal attachments; sometimes the entrant wishes to study under a particular tutor; and for a limited number the matter is decided by the winning of a scholarship or exhibition. Otherwise the choice of college is probably not so vital a matter as it is often supposed to be. At all events, nobody need feel that because one college has no room for him, his academic career will be blighted by going to another. At one time there were great disparities of prestige between different colleges, and although differences still exist, in popular estimation and even in fact, they are on the whole much less marked than formerly. Each college has its own distinctive merits for those who are receptive of them. A young man who is trying to decide between the attractions of different colleges should be careful where he seeks counsel. Frequently advice of an emphatic kind is given by friends and relations whose undergraduate days are long past. Their opinions are not always reliable, for an Oxford college may change considerably in standing, as it is certain to do in the personnel of its staff, in twenty or thirty years. It is best, therefore, to have the guidance of those whose experience of Oxford is comparatively recent. This is particularly true of expense, in which colleges vary considerably—not so much in actual charges to their members as in the general standard of

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living which is customary. As between the large and the small college the choice must be governed principally by the individual's tastes and temperament. On the whole, it may be said that in the larger colleges he will be more free to 'walk by himself', if that is his inclination—though if it is too strongly his inclination, he will not be a very happy member of any college. In a small college, he must be prepared for more collective co-operation and more gregariousness than he would find in the more populous societies, which sometimes show a certain tendency towards 'cliquism'. This emphasis on *esprit de corps* may be irksome to some natures; on the other hand, the small college has the advantage that it may offer opportunities of personal development and influence to the man who might be lost in the crowd of a larger society.

Let us assume that these preliminary questions have been settled, and that on a day in early October our freshman 'comes up'. He will find, at the college lodge, that his name is already known to the Porter—a very important official, of humane disposition and remarkable memory: a man from whom nothing is hidden and whose good opinion is worth possessing. The new arrival is told on which staircase his rooms are to be found, and, unless he is captious, he will be well satisfied with his sitting-room, which is usually a comfortable and reasonably commodious place, though by no means luxurious. If he is fastidious, he may be a little critical of his bedroom, which is generally of the proportions of a cubicle only, and severely inornate. But builders of old evidently believed that in a place to which one resorts in order to become unconscious of one's surroundings, the surroundings do not greatly matter; and the occupant, after one glance at the floral luxuriance of the wall-paper, will probably appreciate the advantages of unconsciousness.

These rooms, for the next year or two, are to be the 'assigned and native dwelling place' of the man whose name is over the door; but the amount of privacy which compasses them about will depend on the number of the occupant's friends and interests. Privacy has, on the whole, declined in

Oxford. Everybody has heard of 'sporting the oak', and the theory is that if the outmost of an undergraduate's two outer doors is closed, it is an unpardonable intrusion to disturb his retirement. But the custom is unknown in some colleges, and in many it is merely an abstraction, seldom put into practice. In his second year, when he often has the opportunity of moving, a man learns to avoid rooms on the ground floor, which are too inviting a port of call for ships that pass in the night; but in his first year, he will not suffer, and may appreciably gain, by being receptive of casual social intercourse.

The new-comer is now to be a freshman for a year, and may regard the prospect with some misgiving; but few disabilities attend this humble status. The detestable practice of organized 'ragging' is hardly known at Oxford. The freshman will not suffer from unwelcome attentions; he is much more likely to feel a little discouraged by cold disregard. The senior undergraduates will be apparently unconscious of his presence, though the more responsible among them are probably keeping an eye on him and 'sizing him up' as a member of the college. Nobody will go out of the way to make him feel small; all that is expected of him is that he shall not feel too big—in other words, that he shall behave with the discretion which is appropriate to a new-comer into any society. If, however, he commits the cardinal sin of obtruding himself aggressively, he will probably receive, first, a friendly warning, and if that is ineffectual, a lesson which will instil circumspection by means of ridicule rather than chastisement. Such measures are seldom necessary. If he is an athlete of any distinction, the mandarins of his particular game will know all about him long before he arrives, and will soon invite him to prove himself on river or playing-field. In any case, whether he be distinguished or not, representatives of different sports will call upon him to ascertain his powers and give him opportunities for testing them. Not everybody can excel at games, but it will be a pity if he does not play something or other; for there is a certain prejudice, especially in

a small college, against a man who 'does nothing for the college'. However, he will satisfy public opinion if he shows some reasonable interest in outdoor pursuits, and does not merely 'frowst' within four walls. Something besides intellectual earnestness is expected of the Oxford man. The schoolboy affectation that study is an unmanly weakness, to be scorned and disavowed by the truly masculine, is cast off at Oxford. Hard work is necessary, even if nobody ever admits to doing half as much as he does, and industry is respected. But it is felt, and justly felt, that a man who has no interests of the more mundane sort, outside himself and his work, has little *raison d'être* in a collegiate society.

The freshman will now have made the acquaintance of his college servant, or 'scout'. Oxford scouts are a chosen people, not to say a peculiar people. Acquaintance, often lengthy, with successive generations of undergraduates has taught them tact, tolerance, and much shrewdness in their judgement of human nature. If they are of the right kind—and they generally seem to be so—they are not mere employees, but members of the college, to which they feel a loyal attachment. The relationship between them and the undergraduate is usually friendly and sympathetic, and not *de haut en bas*; when exceptions exist, the fault is not commonly with the scout. They are responsible for attending on the number of sets of rooms which make up a 'staircase', and their duties are those of the general domestic kind, besides service at Hall dinner.

Formerly, all meals except dinner were served in rooms, but a good many colleges now have a common breakfast and some have luncheon in Hall. Luncheon is usually of the lightest kind, partly for reasons of economy and partly because the meal is generally to be followed by hard exercise. Tea may be had in the Junior Common Room, but is usually taken in a man's own rooms; it may be served from the college buttery, but is generally brewed and served by the undergraduate himself. It is a popular meal, often remarkable for its bulk and variety of indigestible foods. In winter especially, when

darkness descends in the middle of the afternoon and the fire blazes invitingly after games, tea is a great rallying-point and a favourite form of entertainment, the more intimate for its total informality. Dinner is the only formal meal, and it is served in Hall for dons and undergraduates alike. It is the subject of much satire. It is cheap, and consists of what is known as 'good, plain food'. Actually, it is an adequate, if not a sumptuous, meal at a moderate price; but Oxford must have butts for its epigrams, and undergraduate wit would be starved of its richest opportunities if Hall dinner were ever admitted to be fit for human consumption. This meal is semi-compulsory; that is, one is not compelled to eat it, but one is compelled to pay for it at least four times a week. Many contrive not only to pay for it, but to eat it, with well-concealed relish, seven times a week. Whatever it may lack in culinary distinction, it is a pleasant social occasion, when the majority of the college are assembled together at a common table in surroundings of charm and dignity. It has its own manners and customs. He who commits any of a certain number of recognized types of *faux pas* may be 'sconced' by the senior undergraduate at his table. Either he must supply beverages for the whole table or he must 'floor', i.e. drink with one breath, a sconce holding three or four pints of liquid. In some colleges, when sentenced to a sconce, the condemned man has the right of appealing to the High Table, where the dons sit: but he must appeal in Latin, and if his Latin is bad, the sentence is not only confirmed but increased.

At dinner, the undergraduate takes what is provided. For breakfast and luncheon in his own rooms, however, he may order anything he likes from the considerable repertoire which the kitchen offers. He is charged accordingly, and the cost of his diet, together with all other college charges for rent, maintenance, tuition, and various items of the same nature, compose his 'battels'. These are made up at the end of each term, and, in many colleges (but the system varies), presented for payment at the beginning of the ensuing term. The fixed charges for maintenance, establishment, tuition,

college athletic clubs, and the like, are the same for everybody; for the rest, the undergraduate may live as his means permit, but he will soon find that if he pampers himself, his battels will reach formidable proportions; and if they show evidence of undue or ostentatious extravagance, they will be censured and restrained by the Head of the college. This is seldom necessary, for most undergraduates, sometimes by choice and generally by necessity, nowadays live frugally, and nothing could be more false than imaginative pictures of unbridled luxury in 'the playground of the idle rich'.

It will probably have been decided before the freshman comes into residence for what School—i.e. Final Honour School—he is to read, and within his first week he will have met the tutor to whom he is assigned and will have begun work. The tutorial system is described elsewhere in this volume: here it is only necessary to say that the relationship between tutor and pupil is not, or ought not to be, purely pedagogic. It should be co-operative and mutually sympathetic: and often it becomes, so far as difference of age will allow, an intimate personal friendship. Dons, therefore, may and often do play a large part in the ordinary social life of a college: and unless some such spirit as this exists between teachers and taught—or if, conversely, a gulf is fixed between them except for purely didactic purposes—nearly always there will be something wrong with the 'tone' of the college and it will shrink in efficiency and repute. But it is, needless to say, among his own coevals that the undergraduate will find most of that 'social life' for which Oxford is famous.

What is the 'social life' of Oxford colleges? The term is misleading and a little depressing, when we remember the gruesome associations of perfunctory conviviality which often cling to the adjective 'social'. There is nothing of this in Oxford—nothing of the 'social round' or of the grim necessity of being, at all costs, a 'good mixer', all things to all men. The social life of Oxford consists in coming in contact, spontaneously and intimately, with men of one's own age, who possess some least common denominator of similar

interests, tastes, ideas, and associations, and yet exhibit different points of view which are matured by synthesis, by interchange, and even by clash. An Oxford college is a common meeting-ground which provides a subtle, pervasive, and insistent stimulus to this interplay of influences. The man who profits least by Oxford is the man who comes to it with a set of ready-made ideas and a set of ready-made friends. It may take some time to find congenial associates, British 'reserve' being what it is, and the freshman straight from school may feel at first that worst loneliness—the loneliness of the crowd. But, unless he is under some inherent disability of temperament, it will not be long before he finds himself a member of a little circle who like to visit each other's rooms at tea-time or at dead of night, and—just talk. It may not always be the inspired dialogue which, in novels, invariably coruscates in college rooms, but it is often sincere, searching talk about the things which ought to concern young men most and which gain enormously from ventilation in the good air of tolerant discussion. Probably it is at its best when it is unpremeditated, springing spontaneously from the occasion; and this it frequently is. Men both of sensitive intellectuality, and of intensely 'practical' interests (like Cecil Rhodes) have found in this entirely unofficial, undidactic commerce the most formative discipline of their faculties.

But all the social activities of Oxford are not casual and unpremeditated. There is an infinite number of societies to which an undergraduate may belong, and for many men the problem is not to find enough social interests, but to keep them within practicable bounds. Every college has its own societies, some of them of very ancient traditions, existing for many different purposes. There is generally a Debating Society, and some kind of literary society where either plays are read or papers are presented on literary topics; a good many colleges have Dramatic or Musical Societies of their own; the lawyers probably have a Moot Club; and there are societies which exist for purely convivial purposes. The convivial aspect, indeed, may predominate in clubs which

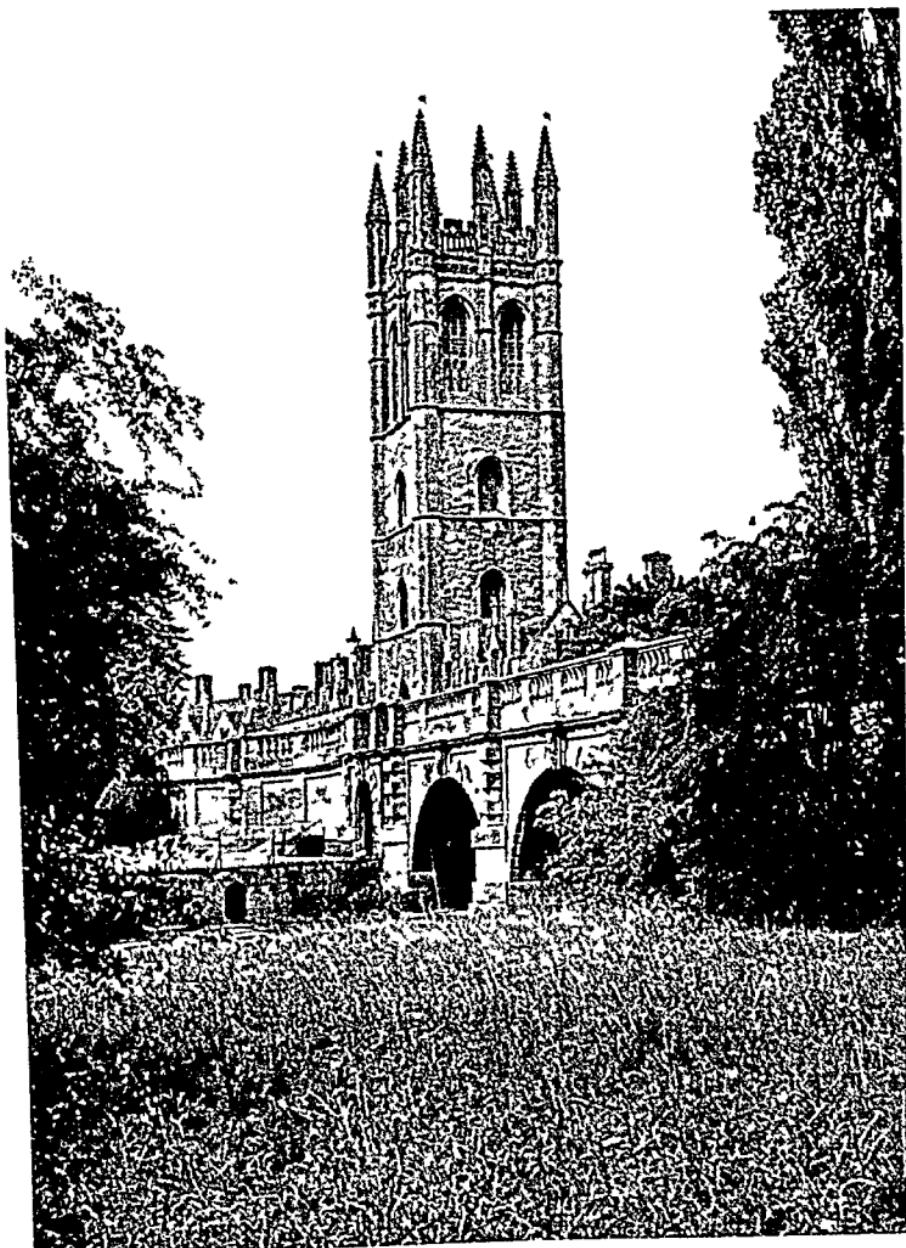
wing by itself. This is constructed on the Parliamentary model, and the debates, which are held weekly during term, are also Parliamentary in plan and procedure. The Union, as everybody knows, has been the training-ground of many eminent British politicians, and it affords ample opportunities for aspiring statesmen and public speakers. The Presidency (which is held for one term only) is considered a high undergraduate honour. The debates cover a great variety of subjects, predominantly but not exclusively political, and are judiciously blended of the grave and the gay: and the speakers often include visitors who are distinguished in different departments of public life. A valuable feature of the Union, considered as a club, is its lending library, which is particularly rich in modern fiction and English History and Biography.

Another famous society is the Oxford University Dramatic Society, familiarly known as the 'Ouds'. Its purposes are partly social and partly dramatic. It has its own club rooms, where meals are served and the usual club facilities are provided; and every year in the Hilary Term it produces a play, on a somewhat elaborate scale, which 'runs' for a week. In addition the Society has, since 1921, given an *al fresco* performance, usually a Shakespearian comedy, in a College garden during Commemoration week. By its charter from the Vice-Chancellor, at least four out of the eight plays produced in a cycle of four years must be by Shakespeare, one must be a Greek play, and three may be by an author of 'classical' standing other than Shakespeare. A high level is reached in many of the productions, and a fine Shakespearian tradition has been maintained. Many well-known and successful actors have had their first training in these amateur performances, which are very popular and are considered one of the interesting events of the theatrical year.

Other university societies are legion. There is, for example, an Opera Club, which produces an opera every year, performing for a week. There is a Musical Club: it meets every week during term in its own building, which not only serves as an auditorium for informal concerts, but provides the

members of the Club with the facilities of practice-rooms and an extensive library of music. There are political, scientific, and learned societies without number: there are purely social clubs, such as Vincent's—mainly for those who are distinguished in sport—the Gridiron, and the Bullingdon: and particular mention must be made of the Raleigh and the Bryce Clubs, which are specially concerned with imperial and Anglo-American affairs. It may be said, in general, that whatever a man's interests and tastes may be, he will find at Oxford a nucleus of persons like-minded with himself and ready to exchange ideas with him. The arts are well served—music, perhaps, most plenteously. There are various large and small musical organizations, and there is no lack of public performances by artists of repute, some of them among the best in Europe. Musical instruments of all kinds (except, in some colleges, gramophones and wireless receiving sets) are permitted in college rooms, but their use is restricted to about five hours in the afternoon and evening, when neighbours are not usually at their studies.

A community of people living together on the collegiate system must have some authority over it, and this brings us to college discipline. It is not very formidable. A reasonably industrious and decorous undergraduate may pass through his whole college career without ever being made conscious that a scrutatorial eye is always upon him. There are certain commands and prohibitions common to all colleges. Everybody must be in college by midnight, and the breach of this rule is a serious offence. On a certain number of mornings (usually thirty) each term, the undergraduate must, in most Colleges, signify that he is at least technically up and doing by attending either chapel or 'roll-call' at 8 a.m. Otherwise, the undergraduate's goings and comings, uprisings and down-sittings, are almost entirely at his own command, with certain manifestly necessary limitations on disorderliness and insubordination. The Head of the college is the ultimate disciplinary authority, but his deputy for most ordinary purposes is the Dean. The wages of sin are 'gating'—i.e. inhibition



16. MAGDALEN TOWER AND MAGDALEN BRIDGE

from leaving the college after a certain hour (commonly 9 p.m.) for a certain number of days or weeks—or fine. The extreme penalty is expulsion, or ‘being sent down’, either for a specified period or permanently. All these forms of penalty may be imposed either by the college or by the disciplinary authorities of the University, who are the Vice-Chancellor and Proctors; but these latter officials are concerned only with trespasses committed outside the college, and have no jurisdiction inside it—indeed, cannot enter it except by courtesy of the college authorities. The Proctors are primarily a co-ordinating link in University administration, and their main function is to serve as co-adjutors of the Vice-Chancellor on all the more important administrative boards, committees, and delegacies, besides representing the University at the conferment of degrees and on similar ceremonial occasions. But this side of their activities is not spectacular, and is of little interest to the undergraduate, who sees them only as ministers of admonition and correction. They regularly patrol the streets at night, accompanied by minions who have been known throughout the ages as ‘bull-dogs’, or, more affectionately, ‘bullers’. They wear a distinctive costume, and the effect of their presence in public places is cautionary rather than minatory; but it is their duty to challenge any member of the University, being *in statu pupillari*, who is manifestly committing a breach of academic rules—such as failing to wear a gown after nightfall—or a violation of (a somewhat liberally interpreted) propriety. No undignified expostulation takes place upon the scene of the offence, unless the suspect attempts to flee from justice, in which case the ‘bull-dogs’ are unleashed to the chase; the delinquent is required, with the utmost politeness, to call upon the Proctor at a stated time, when his defence is heard and judgement is delivered. Penalty takes the form of pecuniary fine, gating, or, in grave cases, expulsion.

The Proctors supply a valued diversion in undergraduate life. The warfare which exists between them and their prey is, for the most part, of a very mild and good-natured kind,

and Oxford would be the poorer without it. There are certain well-recognized rules of the game—of tact, forbearance, a sense of humour, and a Nelsonian blindness on the one side, and of strict truthfulness and a corresponding sense of humour on the other side. Played thus, the game is salutary, and no undergraduate of the right temper considers his Oxford career complete until he has been caught unawares without his gown, and has been ‘progged’ to the extent of five shillings for his academic nudity. Only a dour and ill-balanced nature considers itself outraged by this discipline, which not only safeguards minor observances but maintains a standard of behaviour very necessary in a purely academic community.

The undergraduate’s industry and progress in his studies are entirely the affair of his college, and the University judges them only by their results in examinations. It is the essence of the Oxford tutorial system that a man should be taught and encouraged to use his own faculties in his own way, and nothing is more alien to the Oxford method than spoon-feeding on the one hand or slave-driving on the other. Nevertheless, if a man is habitually idle or recalcitrant, he is not justifying his existence as a member of the University, and if he fails to respond to admonitions, he will be required to make room for somebody else with more serious intentions. The tutor to whom the particular pupil is assigned is responsible for reporting on his work, and these reports are frequent and thorough. If unfavourable, they are communicated to the pupil, with suitable exhortation, by the Head of the House (college). Some colleges also assign to each man a second or ‘moral’ tutor, whose business it is to keep a friendly eye on his charge not as a student but as an adolescent individual. The formal tests and judgements of scholastic progress are known as ‘Collections’—a term of dual meaning. In one sense, it denotes a peculiar ceremony at the end of each term, when every member of the college appears separately before the assembled Fellows, and receives from the Head a few words in appraisement of the work which he

has done during the term. In another sense, 'Collections' mean examinations which most colleges hold at regular intervals—often once a term—to test men in the work which they have been doing recently with their tutors. These are purely domestic arrangements, and have no bearing upon University Examinations for degrees. Good work in Collections, however, is sometimes rewarded by college prizes; and bad work may be the occasion of pointed comment.

There is little 'organization' of the undergraduate members of a college as such. In most colleges two persons are elected annually as representatives: they are known as the President and Secretary of the Junior Common Room, and the holding of either of these offices is a mark of prominence and popularity. The duties attached to these offices are, to the casual glance, trifling and almost fictitious; there are few serious meetings of the undergraduate members of the college and such business as takes place is usually somewhat perfunctory. The real work of the leaders of the college, if they are worthy of their office, is of a much more subtle kind than the competent performance of executive functions; it consists in an alert sensitiveness to the 'tone' of the college, in the exercise of judgement and tact, and in the doing of many entirely unofficial and unconventional things in order to maintain a healthy efficiency. If the undergraduate leaders are sound and vigilant, there will be little need for dons to intervene in those indefinable matters of 'atmosphere' and standard which mean so much to a corporate body. Indeed, in most respects except actual instruction and the more obvious considerations of orderly conduct, the undergraduates who make up a college are in a very real sense a self-governing body. They have their own well-understood, if vaguely-defined, principles of obligations and their own methods of reinforcing those principles with the sanction of public opinion. This is not to say that individual dons may not have a strong and constant influence on the general spirit of a college: but just as Oxford men are expected, with proper guidance and assistance, to rely on their own powers of intellectual self-development, so

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they are expected to develop their own characters and their own standards of conduct by voluntary submission to the claims of harmonious co-existence.

Discipline, official or unofficial, is not severe or inquisitorial; but it necessarily imposes certain minor restraints, some of which may be of doubtful utility, on personal freedom. Those—and they are few—who make a grievance of these restrictions are deficient in a sense of proportion; for it is one of the merits of undergraduate life that in all the things which really matter, liberty is as nearly unrestrained as it can ever be in an aggregation of human beings who cannot live together without mutual concessions. The worst tyranny is tyranny over opinion. It does nobody any harm to be in college by midnight or to wear a gown after dark: but it may do great harm to insist that every man shall, on pain of ostracism, think and believe like every other man. That type of mass-intolerance, that fierce despotism of the mob-mind, Oxford, on the whole, succeeds in avoiding. Provided that he does not gratuitously obtrude his convictions or go out of his way to outrage those of others, a man is at liberty to think what he likes and to act accordingly. Indeed, tolerance is sometimes carried almost to a fault, and may result in an unreflective admiration for a kind of 'originality' which is little more than a pose. It must be admitted that no place offers more opportunities for the accomplished *poseur* than Oxford. But true originality and independence of mind are also respected by juniors and they are certainly fostered by seniors; or, if they are not respected by those who are cast in a more conventional mould, at least they are seldom assailed or persecuted.

A college is generally described in its charter or statutes as 'a place of religion and sound learning'. It is unnecessary to mention that until comparatively recent times membership of the Church of England was a necessary qualification for admission to Oxford. Only one college—Keble—now retains this condition: with this exception, persons of all creeds are admitted equally. But each college has its chapel and its

chaplain, of the Anglican faith; there are nonconformist places of learning in Oxford but they are not colleges in the technical sense. At some colleges a certain number of attendances at chapel are compulsory, in the absence of conscientious objections. But in many colleges nowadays attendance at chapel is entirely voluntary, even for members of the Church of England. The spiritual life of Oxford is widespread and various, and there are few places where so many different shades of religious opinion are represented; but the *odium theologicum* which shook all Oxford and all England in the days of Newman and Pusey is absent to-day. The spiritual side of undergraduate life is guarded by jealous reticences. It is a convention of Oxford life, and, indeed, of English life, that anything which may have a controversial religious tendency is *taboo* in ordinary conversation, and any violation of this rule is a gross breach of decorum.

Whatever individual religious conviction may be, few can be insensible to the outward and visible adornments of the Established Church in Oxford. Many chapels are places of singular architectural beauty, and several colleges maintain choirs of high merit which provide abundant opportunities for enjoying the best ecclesiastical music. In short, for the spiritually minded, the means of grace are overflowing; and even for those who are not so minded, the sensuous accompaniments of devotion may offer at least an aesthetic charm.

These, then, are some of the surroundings and influences of college life, ministering to the mind and the character. The body must also receive solicitous attention in the relaxing Oxford climate. 'Exercise' is a rule of life, and the undergraduate who attempts to ignore it will soon suffer from the dank humours of the Thames Valley. The morning will generally be spent in attending lectures in different colleges: if these lie far apart, the means of transit will be a bicycle, one's own or somebody else's—it matters not, for probably they are indistinguishable in point of decrepitude. Or there may be a 'tutorial hour', or work in preparation for one which is impending. But between 2 and 5 p.m. Oxford with one

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accord abandons intellectual pursuits, and every college is like a habitation deserted. From each lodge pours out a stream of men in all varieties of athletic attire. Every college has a playing-field of its own, sometimes close at hand, but generally at some distance from the main buildings. There are usually at least two teams in all the more popular forms of sports, such as Rugby and Association football, cricket, and lawn tennis, besides two and sometimes more crews on the river. Not everybody can get into these teams, or can excel at other sports, such as 'track', golf, hockey, lacrosse, boxing, swimming, squash rackets (a game of growing popularity), or fencing. But even those who do not play for 'Varsity or College can take the air for an hour or two every day, and no wise person omits this part of undergraduate routine. Failing anything else, one can always walk: and it is unnecessary to remind anybody who has ever read Matthew Arnold that the Oxfordshire country is worth exploring. Much is said of the ravages of the motor-car and the charabanc, but in reality, as soon as the wayfarer leaves the more populous highways, the greater part of the English countryside is still unspoiled, and there are villages within ten miles of Oxford where one might suppose that the internal combustion engine had never been heard of. Indeed, for the country walker, the ubiquitous omnibus is a blessing rather than a curse, for it will save him the time and tedium of journeying through the ever-spreading outskirts of Oxford, and within half an hour it will deposit him at some point where he can enter at once into an Arcadian world. Those who take the trouble to study topography will find that for miles round Oxford there is an elaborate network of field-paths which add greatly to the convenience and pleasure of rambling.

There are, of course, intercollegiate contests, most of them of a 'friendly' nature, existing rather for sport and exercise than for honour and glory. Colleges do not award any athletic distinctions; the 'blue', confined to certain major sports, and its lesser brother, the 'half-blue', are awarded at



17. WADHAM COLLEGE HALL

the absolute discretion of the captains of 'Varsity teams, and even so are not awarded to every player who represents Oxford, but only to those who play against Cambridge in the annual inter-'Varsity fixtures. There are some exceptions to the rule of 'friendly' college contests. There are cups, for example, for inter-Collegiate Rugby football and for athletics. But the crucial and spectacular encounter is on the river. Somewhat surprisingly, considering how comparatively few undergraduates can qualify for this sport and how few, also, are trained in it before they come to Oxford, rowing has retained its place as the premier 'Varsity sport. The headship of the river is somehow, in popular estimation, a kind of symbol or index of the general prestige of a college. The system of bumping-races—an ingenious expedient forced on Oxford by a narrow river—is described elsewhere. They take place twice a year, Torpids ('Toggers') in the Hilary or Lent Term, Eights in the middle of Trinity Term, during what is supposed (often falsely) to be the best of the early summer weather. Torpids are really preparatory for the greater contest, and excite a comparatively mild interest. Eights are Oxford's keenest competition and gayest festival. Only a small group out of (say) the two hundred members of a college can be actual competitors on this occasion, but the rest are expected at least to lend their moral support as spectators and partisans. The more energetic will run abreast of the college crew along the towing-path, emitting fearful sounds of appreciation and encouragement, discharging firearms (fortunately harmless) into the air, and otherwise urging their representatives to supreme efforts. The more sedate will watch the finish from the college barge, probably in company with friends and relations of both sexes who are visiting Oxford. Every college has its barge, which at ordinary times serves as a club-house and dressing-room for the oarsmen, and as a kind of grandstand for the annual races. The barges are of different designs and capacities, and all bear the college arms and (during Eights) the college flag. On a fine Eights-week day, they add materially to the vivacity of

the fare, with youth at the prow and pleasure at the helm. Certainly this gala, unsurpassed in its kind, is worth some sacrifice for the sake of possessing a memory which has the precious quality of becoming more roseate as the years increase.

The academic terms are three, and are each of eight weeks' duration. The academic year begins with Michaelmas Term, which extends from early October to about the middle of December: a vacation of six weeks follows: Hilary or Lent Term begins about the middle of January and ends about the middle of March, and there is then another vacation of six weeks. Trinity or Summer Term (when Final Honours Examinations are held) ends late in June, and there is then a Long Vacation of approximately four months. The year is thus divided nearly equally between term and vacation. It must not be supposed, however, that this long period of vacation is all holiday. It is an essential part of the Oxford system that the undergraduate shall do a great deal of his reading in vacation, and anybody who relies solely on his work during term will certainly meet with disaster in his examinations. It is therefore impossible at Oxford for the student to devote his vacations entirely to extraneous, money-earning activities, as is done at many universities in other countries. There is, however, no organized system of College or University instruction during vacations, though college-tutors often arrange 'reading-parties' of small groups of their own pupils for combined relaxation, study and friendly intercourse in England or abroad.

Normally, an undergraduate will reside in college for the first two of his three or four years, though in some exceptional cases he may have to spend his first year out of college. In the ordinary way, then, he will go into lodgings or 'digs.' in his third year. The lodging-houses of Oxford are conducted almost entirely by private enterprise, but a person *in statu pupillari* may reside only in such as have been licensed by the Delegacy for Lodgings as suitable for undergraduate occupation. (The rule does not apply to graduates.) Lodgings are

now scattered over a fairly wide area, those nearest the centre of the town being, on the whole, the most expensive. There are considerable variations in costs, which are a matter of private arrangement, and are not controlled by the University, except that exorbitant charges may cause a licence to be withdrawn. Life in lodgings is naturally less gregarious than in college, and on the whole a man in his third or fourth year, with examinations imminent, does not regret a little seclusion; but he is by no means cut off from college associations. Unless he is of eremitic disposition, he is constantly in and out of college on his lawful occasions. Frequently, too, groups of three or four friends lodge together. The only discipline in lodgings is that men must, as in college, be indoors by midnight and must not give the lodging-house keeper cause to complain of any flagrant indecorum. On the whole, living in lodgings is somewhat cheaper than living in college, though this naturally depends on the kind of lodgings which are selected. Social entertainment, simple or elaborate, goes on in 'digs.' in much the same way as in college, with the difference that those who are able to afford it can bid their friends to private dinner-parties in lodgings: this cannot be done in college, except by special permission, which is sparingly given.

There are many aspects of Oxford college life which are extremely difficult to define or to describe. Each college has its *ethos*, made up of a number of intangible elements, and drawing breath from an atmosphere of tradition which is as impalpable as it is pervasive. Although, as has been said, slavish acquiescence, conformity, and the suppression of individuality are no part of the Oxford system, yet it is a singularly intractable individual who is not, in some sort, influenced and quickened by the corporate spirit of the Society to which he belongs. Analysis cannot reduce to his component elements the 'typical' X college man or Y college man or Z college man: but he has passed through an alchemy not quite the same as that of any other college, and, for better or for worse, he bears a certain imprint. All the offshoots of a

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college, however slender they may seem, spring from a deeply rooted stem. That fact was never more vigorously demonstrated than in 1919, when, after four years of suspended animation which seemed perilously like extinction, University and college institutions great and small, and of every complexion, rose from the dead with indestructible vitality. The multiplicity of Societies in Oxford has its serious disadvantages: it leads to a certain separatism, sometimes near to parochialism, which subordinates general University interests to local prejudices and makes it difficult to frame any uniform policy in matters of common concern. But it has the advantage which Dr. Johnson pointed out long ago: 'There is here, Sir, such a spirit of progressive emulation: the students are anxious to appear well to their tutors; the tutors are anxious to have their pupils appear well in the college; the colleges are anxious to have their students appear well in the University.' It seems difficult for human beings to conduct their affairs without partisanship, and for adolescence 'progressive emulation' is no bad stimulus.

We have been concerned here only with the collegiate societies, but those to whom economy is an imperative consideration, and who cannot belong to a college, may yet find much that is characteristic of Oxford as members of St. Catherine's Society, the body of non-collegiate undergraduates. Lacking college accommodation, members of this Society live the ordinary life of undergraduates in lodgings, and although, necessarily, they cannot enjoy the same number of communal activities as those who live together beneath the same roof, they have many joint interests and enterprises and are by no means lacking in the 'progressive emulation' of their fellow-students of the more ancient foundations.

University Ceremonies, University Dress, College Arms. The reader may be referred to *Oxford University Ceremonies*, by L. H. Dudley Buxton and Strickland Gibson (1935), for a full account of such subjects as Academic Dress, University Assemblies, University Ceremonies, University Officers, the University and the Town. For college coats of arms, reference should be made to *Arms and Blazons of the Colleges of Oxford*, by F. P. Barnard and T. Shephard (1929), illustrated in full colour.

THE TUTORIAL SYSTEM

By CYRIL BAILEY

THE tutorial system,¹ though in its present form it is the product of the latter part of the nineteenth century, has its roots far back in the past history of Oxford. It is indeed an almost inevitable outgrowth of the constitution of the University as an aggregate of independent colleges. In the earliest days of the University the teaching was in the hands of the Regent Masters, but it was natural that the senior members of a college should feel some responsibility both for the conduct and for the education of their juniors. This responsibility had been recognized in many of the early college statutes. In some, such as those of Merton, Queen's, and New College, teachers were appointed in such subjects as Latin, grammar, and logic; in others, as at Magdalen and Brasenose, tutors were expected rather to instruct their pupils in good manners, and in particular to have a financial control over their expenses. The Laudian Statutes of 1634 required that all scholars should have tutors, graduates of character, learning, and religion, approved by the Heads. The tutors were expected to inculcate the doctrines and discipline of the Church, and to see to the dress and behaviour of their pupils. An interesting extract from a letter of Henry Brougham, Fellow of Queen's, to Sir Daniel Fleming of Rydal, who had entrusted two sons to his charge, shows the range of tutorial responsibility recognized in 1695: 'Their battles²', he writes, 'notwithstanding all that has been said, continue very high, and for my part I can doe no more than I have already towards reforming that excess, without taking such courses as might have worse consequences. If you should again conclude from hence, that their application to their studies has not been so great as it ought, I do not know how we can avoid y^r inference.'

¹ For the early history of the tutorial system see *A History of the University of Oxford*, by Sir Charles Mallet, esp. vol. iii, pp. 56 ff.

² Battles—now spelt 'battels' = college bills.

These arrangements were informal and unofficial, and both the direct relation of parent and tutor and the large measure of financial control may be accounted for by the comparatively early age at which undergraduates then came to the University; a boy of thirteen or fourteen might well have his allowance doled out to him by his tutor in 'crowns' and 'half-crowns'. The eighteenth century was on the whole a period of stagnation at Oxford, and Samuel Johnson's account of his undergraduate days at Pembroke does not suggest that he got much from his tutor, William Jorden, though he clearly felt a strong affection for him: 'whenever a young man becomes Jorden's pupil, he becomes his son.'

So far there were tutors, but nothing that could strictly be called a tutorial system: arrangements were private, and the college as a body took no official responsibility. In the nineteenth century and especially after the Royal Commission of 1850 great changes took place. The teaching of the University in the hands of the professors became far more efficient and covered a wider and wider range as new Chairs were founded. But the development and organization of University examinations and the consequent rivalry among the colleges for distinction in 'the Schools' led colleges to the conclusion that the teaching of the Professoriate must be supplemented by instruction within the walls of the college. Appointments were made to Tutorial Fellowships and men were expressly chosen for the office on the ground of their ability to teach. At first their services were confined to men of their own college and, there being comparatively few studying any given subject at one moment, instruction was largely given by informal lectures or classes, held often in the tutor's private room; at these question and answer were interspersed in the continuous lecture, and in the classical books, which formed a large part of the subjects of study, pupils would be 'put on' to construe. In the latter part of the century colleges began to form combinations for lectures, the lecturers admitting members from other colleges in the combination, and finally the opening of lectures by college tutors to all members of the

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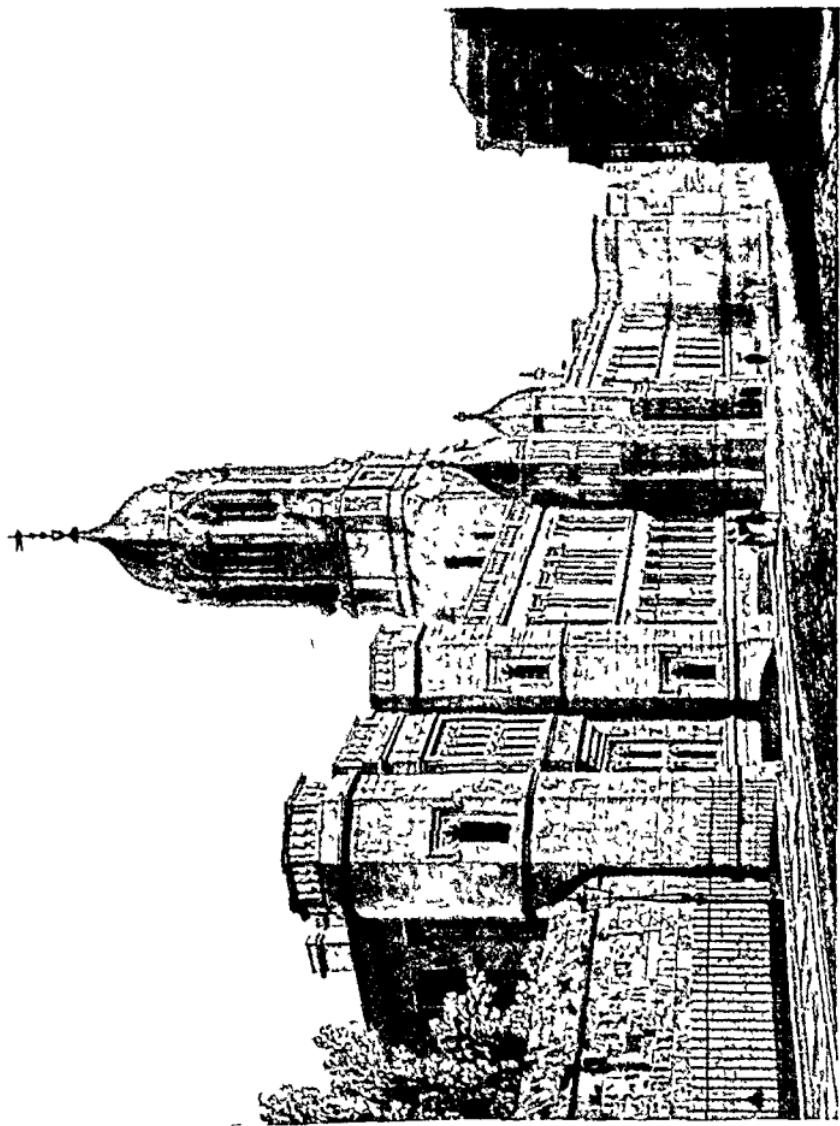
University introduced what was in effect a University lecture system. This was regularized and made far more effective, when all the teachers in one subject were organized in Faculties and the Board of each Faculty was authorized to draw up a scheme of lectures in its own subject. The teaching of professors and college tutors was thus co-ordinated and the covering of the field secured. A further step was taken after the Royal Commission of 1925 by the appointment of certain college tutors as University lecturers, it being thus recognized that their lecturing was a service to the University as a whole as well as to their own colleges.

All this expansion produced a corresponding change in the functions of the college tutor. Informal discussion was no longer possible in lectures attended by large numbers, nor did they provide the same opportunity of personal contact between tutor and pupil. The lecture had passed from an informal class to a more or less set discourse. To strengthen the direct relation of the tutor with his pupils there took place a great development in the private work in the tutor's room. His pupils came to him regularly either singly or in small groups for advice on their course of work and to bring exercises or essays for his criticism. Meanwhile the range of the curriculum of the University 'schools' was constantly increasing, and colleges endeavoured as far as possible to have on their staff tutors in all or most of the recognized subjects. The abolition of life Fellowships by the Royal Commission of 1877 made it possible to elect a succession of Tutorial Fellows, whose primary function was the instruction of the undergraduates.

Such is roughly the position at the present day; a tutorial system has been fully organized and working for many years. The freshman on his arrival at the beginning of his first term is introduced to the tutor in charge of the subject which he intends to study. At his first interview the tutor will discover how far advanced the pupil is already and will acquaint him with the requirements for the examination which he will next have to take. Where there are alternatives

he will advise him as to his choice and help him, as far as possible at that stage, to settle his programme. Looking then to the immediate necessities he will suggest a course of reading to be begun at once and, consulting the list published by the Board of Faculty concerned, recommend the lectures which he should take. During term each man will attend a 'tutorial', as post-war Oxford has agreed to name it, at least once a week. The exact form of the 'tutorial' will necessarily vary: in some subjects, such as mathematics or Greek and Latin composition, the men will usually be taken singly; they will have written some set exercise which the tutor will criticize, suggesting improvements in method or phraseology. In other subjects, such as history, philosophy, or economics, which involve essay-writing, men will be taken by the tutor singly or in pairs or small groups. One or more members of the group will have written essays, which they will read; the tutor will invite the criticism of the others and make his own comments, usually summing up and suggesting the best method of dealing with the subject. The proceedings will be quite informal, and most tutors will encourage the pupils to ask questions and to discuss among themselves. A recent witty critic of Oxford, asked how the tutor conveys his instruction to his pupil, replied 'he smokes at him': the answer suggests both the intimacy of the 'tutorial' and the meditative character of the tutor's criticism.

The method will of course vary in different subjects and with different tutors. The man studying chemistry or physics, for instance, will probably be interviewed in the laboratory and his 'tutorials' will take the form of the supervision of his practical experiments as well as the hearing of essays. Nor must it be supposed that in any subject tuition will necessarily be confined to the immediate business of preparation for examinations. The tutor is in most instances a man who is working at some special department of the subject for himself and often has a specialist reputation. Something of his interests and knowledge will inevitably be conveyed to the pupil, who will in this way get an insight into the methods of



18. THE WEST FRONT OF CHRIST CHURCH, WITH TOM TOWER

From Ingram's MEMORIALS

higher work. More particularly is this the case when the pupil is reading not for the arts degree, but for a research degree, B.Sc., B.Litt., or D.Phil., and the tutor is acting as his supervisor. The tutor's advice as to books to be read or consulted, his suggestions of method and criticisms of the growing thesis will give assistance which could not be obtained in any other way. Indeed the intercourse of tutor and pupil in any of the higher stages of University work is not so much a matter of definite instruction as a companionship in discussion or discovery, and the greatest aid to the pupil should be the intimacy he forms with the mind of one farther on the road than he is himself.

There are two other points in the educational side of the tutorial system which will illustrate its character and efficiency. At the beginning or end of each term—or sometimes at both—the progress of the pupil is tested by college examinations known by the traditional title of 'Collections'. The undergraduates, assembled usually in the College Hall, write under examination conditions their answers to papers set on the model of those in the 'schools'. These are then marked and corrected by the tutor, who goes through each man's work with him and points out its merits or deficiencies. On the last day of the term every undergraduate appears before the Head of the College and the tutors give a verbal report on his work for the term; the Head sums up with words of encouragement or admonition. No official reports are made to parents—in theory the undergraduate is his own master—but unofficially the tutor is often in communication with them and will not only express his opinion of the pupil's work frankly, but make suggestions as to the employment of his time in the vacation.

Secondly, at regular intervals—in many colleges once a week—the tutors meet together with the Head of the College to discuss their pupils' work. Each man will come up for criticism once or more a term, and opinions will be freely expressed not only by the official tutor, but by other Fellows who have come across the man or his work. The result may

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be that the Head will send for him and give him advice or even in cases of idleness threaten penalties. These 'tutors' meetings' are of course not accessible to the undergraduate, but the knowledge of their occurrence often acts as a valuable stimulant or deterrent.

The main outward stress of the modern tutorial system at Oxford thus falls on the educational side: it is recognized that the primary function of the tutor is to instruct. But it must not be supposed that the other side, which played so large a part in the relations of tutor and pupil in earlier days, has been lost sight of in modern Oxford. In some colleges an undergraduate is assigned for all his time to a 'moral tutor', who is often not the tutor to whom he is going for his reading, but one who undertakes to keep in touch with him during his career and to help and advise him generally in his life. In most colleges the two functions are combined: the educational tutor is also the 'moral' tutor, and, though this may mean that a man may often pass from one tutor to another during his years of residence, it has the advantage that the relation is less artificial and springs naturally out of the intimacy over work. It is far less easy to define or even to describe this 'moral' relationship of tutor and pupil than the educational side. In the seventeenth century the tutor's duty even included daily prayers, and well on into the nineteenth century, when most tutors were still in Holy Orders and in spite of the abolition of the Test most members of the University were also members of the Church of England, it was customary for a tutor to give his pupils an occasional address in preparation for Holy Communion. The greater religious latitude of the present day and the wide range of denominational and secular opinion among both Fellows and undergraduates has made such definite religious functions an impossibility; the place of the tutor has here been taken to a large extent by the College Chaplain—often the only tutor in orders. Nor again has the tutor any direct control over his pupils' expenditure; he does not dole out the 'crowns' or inspect his pupil's bills. It is the practice in some Cambridge

colleges that all bills contracted in the town pass through the tutor's hands, and Jowett, when Master of Balliol, invented the custom of 'battel-call' on Saturday mornings, when each undergraduate was given his weekly bill in turn in the College Hall in the presence of the Master, who commented if expenditure had been unduly high—a useful check on extravagance in entertainment in college.

The Oxford theory is rather that of the independent responsibility of the undergraduate for his own life within the bounds of proctorial jurisdiction and college discipline. But this does not mean that the 'moral' relation of tutor and pupil is not a reality. A tutor to whose knowledge it came that an undergraduate was living beyond his means or as a rich man was setting a standard of living detrimental to the general life of the community would not allow it to pass without comment. It is again an unwritten custom that, if an undergraduate gets into trouble over a breach of college discipline or for some misconduct, the tutor will act as the counsel for the defence, and at such times the pupil naturally turns to his tutor for advice and help. The freshman too will ask his tutor for information on college custom and etiquette which he is expected to observe. Here even more than on the strictly educational side the relationship is informal, and it will vary in its intimacy and effectiveness with the character both of the tutor and the pupil. But there are few tutors who would not regard it as part of their duty to keep a general watch on the life and conduct of their pupils and to drop a timely hint if there were a danger of things going wrong. In the majority of cases the relationship develops into one of real friendship, often cemented by 'reading-parties' or joint travel abroad in the vacations. And this friendship will frequently go deep and involve a knowledge of the pupil's home circumstances and a discussion of his difficulties, practical, moral, and intellectual. Nor does it cease with the end of an undergraduate career. As that approaches, the tutor will make it his interest to help to find a suitable occupation for his pupil and in many instances by correspondence and an occasional

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meeting will keep in touch with him for many years. It is still true of many Oxford tutors that 'whenever a young man becomes his pupil, he becomes his son'.

A recent observer¹ of English university life, who was also in many respects an acute critic, has written that 'Oxford and Cambridge establish a personal relationship between the undergraduate and his tutor, that is, despite possible personal limitations, the most effective pedagogical relation in the world'. It is in fact this personal relationship which distinguishes the tutorial system from any other system of University education, the relationship which is rendered possible by the life of the community in a college. It is no doubt open to criticism. Much depends on the personal character of the tutor and on his own intellectual aims, and he is always beset by the danger of falling into a groove and repeating himself from one generation to another. But a tutor who is alive, who is himself always learning, often from his pupils as much as from any other source, can give an undergraduate a stimulus alike in his work and in his life, which he will hardly get in any other way.

¹ A. Flexner, *Universities, American, English, German*, p. 275.

THE SCHOOLS

By P. E. MATHESON

INTRODUCTORY

THE courses of study for the Degree course are set out in the Examination Statutes, published in September. The following summary account of them is intended to indicate the general scope of the different Schools, but students are strongly advised before deciding on their course to consult their college tutor. It will save time if they do so before coming into residence.

EXAMINATION FOR THE B.A. DEGREE

Students who take the B.A. course must, with the exceptions given in the next paragraph, pass three examinations, viz.: Responsions and the 1st and 2nd Public Examinations.

RESPONSIONS

No Student for the B.A. degree may come into residence unless he has passed Responsions or one of the examinations recognized as equivalent to it,¹ with the exception of (1) Students qualified for Junior or Senior status,² (2) Selected candidates for the Indian Civil Service, (3) Service students.³

To pass Responsions a student must pass in (1) two languages, one of which must be Latin or Greek, (2) Mathematics or Natural Science, (3) a fourth subject, either English (History or Literature) or another modern language. Or he may pass by passing in Latin and Greek, Mathematics and Natural Science.

THE CHOICE OF A SCHOOL

The course for the B.A. Degree requires three years of residence, except from students with Junior or Senior status,

¹ These include the examinations of certain other Universities and, in particular, the School Certificates of certain University Examining Bodies. See Examination Statutes.

² See p. 136.

³ See Examination Statutes.

who need not reside more than two years. A candidate will in general reside four years if he takes Honour Moderations as well as a Final Honour School, or if he takes Chemistry, for which, in order to be classed, he has to do a year of research after his Final School.¹

The choice of a School will depend on various considerations—his previous studies, the length of his residence, and, to some extent, the occupation he means to pursue afterwards. Both the Pass and Honours course for the B.A. consist of two parts, tested by the First Public Examination (Moderations) and the Second Public Examination (Final School, Pass and Honours), and in each part the student has to choose between Pass and Honours. He may combine a Pass in one with Honours in the other, or take a Pass in both or Honours in both.² Most students now take Honours in the Second Examination, but some prefer the more general education provided by the Pass course, with its combination of literary, historical, and scientific studies. Some colleges insist upon Honours being taken in one examination (see Pt. II, Colleges).

The First Public Examination consists of an examination in several alternative forms, two of which are Honour examinations—Classical and Mathematical Moderations—and the rest Pass Examinations, viz. Pass Moderations, Law Moderations, the Preliminary Examination in Natural Science, the Preliminary Examination in Agriculture and Geography, and the Preliminary Examination in Forestry. The choice between these will depend partly on the student's previous education, partly on his choice of a Final School.

Most students from English schools during their last year or two at school, while keeping up their general education, will have begun to specialize in some branch of study—Classics, Mathematics, Modern Languages, History, or Natural Science. They will therefore probably have already made their choice between 'humane' and 'scientific' studies,

¹ See Examination Statutes.

² The proportion of men who take Honours is 75 %, of women 80 %.

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but if they take Honours will still have to choose what branch of either they will study for their Final School. The Classical or Mathematical scholar will probably take Honour Moderations and an Honours School in Classics or Mathematics; and so will other students who are strong in Classics or Mathematics. The student who has read Modern History will probably take Pass Moderations and either the Final School of Modern History *or* that of Modern Greats, or begin a new study by taking Law Moderations and the Final School of Jurisprudence. Some mathematicians will prefer Physics or Engineering Science for their Final School, or after taking Mathematical Moderations may turn to Law or History or Modern Greats or, if they know Greek, to Greats.

The Science student, if he is going in for Medicine, will take Physiology as his Final School: other Science students will take one of the other Final Science Schools. In addition there are open to him the Pass Schools of Agriculture and Forestry.

All these have appropriate Preliminary Examinations leading up to them.

Of the Science Final Schools Physics, Chemistry, Physiology, and Engineering Science are perhaps those which are in the closest relation to practical life. But Zoology and Botany are assuming a new importance in connexion with exploration and research in Africa and elsewhere, and deserve serious consideration.

The Final School of Theology appeals mainly to those who propose to enter the ministry of the Churches, but some of those who contemplate this vocation will prefer a School of wider range, such as Greats, Modern Greats or History, taking Theology if they have time as a second School.

The Modern Language student will probably take the Modern Language School, and take as his Preliminary Examination either Pass Moderations or preferably two languages in the Final Pass School.

Those who choose English for their Final School will probably take Pass Moderations, but if they can reside four

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years and are fair classical scholars they will be wise to take Classical Moderations, which is the best foundation for the English School.

POINTS TO BE CONSIDERED BEFORE AND DURING RESIDENCE

I. Before Residence.

The attention of students is drawn to certain preliminary considerations which may affect their position in Oxford and their studies before they come up.

(1) Students who come from a Foreign, Colonial, or Indian University with proper qualifications are admitted on certain conditions to the status of Junior or Senior Student. Such students should carefully study the Statutes concerning them and make early application for the status if they think themselves qualified. The same applies to graduates of other Universities who wish to take a course of advanced legal study for the B.C.L. degree after not less than two years' residence.

(2) Certain Pass Examinations should if possible be passed by students before residence. These are certain Preliminary Examinations in Natural Science or Examinations exempting students from them. If these are taken before residence the student has longer and less interrupted time for his Final School.

(3) Most Honour students will find that for the studies of the Final Schools facility in reading German and French is very valuable. German is important for Greats and the Natural Science Schools, and both French and German for the Schools of Modern History and Modern Greats. In order to acquire this facility some students find it worth while to spend six months or a year before coming up to Oxford in the study of German or French or both abroad.

II. During Residence.

Lectures and Tuition. In all the Honour Schools teaching is given partly by lectures, partly by personal tuition in the

Laboratory or in the tutor's study. The teaching by conversation arising out of essays read by the student and criticized by the tutor is the most characteristic part of Oxford teaching. In Natural Science a large part of the student's time has to be spent in the Laboratory and there is less essay writing. But for all the Schools the practice in writing is very important for success in the Schools and in after-life: and in all Schools it is important to learn the art of taking notes of lectures in such a clear and concise form that they are available for rapid revision.

Reading. One piece of advice applies to all Schools. Students should read some at least of the great writers who have written on the subject they are studying, and not content themselves with text-books, however useful these may be. They will find plenty of help for this purpose in the lists of books provided by the Regulations of the various Boards of Faculties and in the advice and direction of their tutors.

General. Students should bear in mind that, though they must concentrate their attention chiefly on their main study, it is worth their while to take the opportunity afforded in Oxford of hearing occasional lectures by distinguished scholars and men of science, English or foreign, who address the University: e.g. the Romanes, Rhodes, and Zaharoff Lectures, or special lectures by resident professors. Such lectures are advertised in the weekly official publication, the *Oxford University Gazette*.

FIRST PUBLIC EXAMINATION

Students who take a three-years' course will in general take as their first examination either Pass Moderations or Law Moderations or the Preliminary Examination in Natural Science.

§ *Pass Moderations*

This offers a wide choice of subjects, with the restriction that the candidate must take two languages, one of which must

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be Latin or Greek, and be examined in unprepared translation and a set book in each. He must also take two other subjects: one of these may be a third language, and one or both may be chosen from the following—Mathematics, Political Economy, subjects in Ancient and Modern History, English Constitutional Law, English Literature, Prose Composition in Latin, Greek, French, or German.

The course of study is one of general education, continuing school studies, and also offering opportunity for the study of new subjects. On the literary side it demands a careful study of selected books. The student may take up subjects which will prepare the way for his Final School, e.g. Economics or Logic for Modern Greats, or European History or Modern Languages for the Modern History School.

A student who has an adequate knowledge of Greek cannot do better than take as one subject the study of Plato's *Apology* and *Meno* or Aristotle's *Politics* i–iii. A careful study of either book will afford an excellent discipline.

Note. Students going on to the Modern Language School may find it advisable to take instead of Pass Moderations two of the Language subjects of the Final Pass School, e.g. French and German or German and Spanish.

§ Honour Moderations in Greek and Latin Literature

Classical Moderations is taken in the fifth term of residence, so that a student who takes this examination has four terms for his Final School if he resides three years, seven terms if he resides four years. If a student resides only three years he cannot with advantage take Honours both in Moderations and the Final School.

The course for Classical Moderations is a continuation of school work but with more intensive study and a somewhat wider range of subjects. The best students along with their reading for Moderations will be reading for the Hertford and Ireland Scholarships and writing Latin and Greek Composition for University Prizes.

The examination includes Latin and Greek Composition,

in Prose and Verse, but Verses and Greek Prose are optional and candidates may take in place of them an additional Book or Special Subject. Besides Composition and Unprepared Translation all candidates must select two 'Books', of which one must be a verse book, i.e. portions of Greek and Latin authors, for special study, and must also study, for translation and general appreciation without minute attention to textual questions, a wide range of other authors.

In the choice of the special Books students are advised to select at least some portions of literature that they have not studied before, in order to widen their range of classical reading. Those who are going on to Greats, if they are slow readers may like to choose some of these Books from the Greek and Latin historical books prescribed for Greats, e.g. Tacitus, Livy, or Thucydides.

Besides the subjects already mentioned candidates must take one or more out of a long list of Special Subjects.¹ In making his choice it is very desirable that a student should select at least one subject in which he will find something different from his school studies, e.g. Greek Sculpture, Homeric Archaeology, Greek Drama with Aristotle's Poetics, or Logic. The Poetics is recommended to those who are interested in literary criticism and the history of drama, and Logic to all who are going on to Greats, for which it is a useful, perhaps an indispensable, preparation.² Those who are going on later to research work, either in language or literature or archaeology, will find appropriate Special Subjects.

The student's knowledge of classical life and literature is also tested by two papers of a more general character which include questions on Homer, Virgil, etc., together with questions on grammar and on ancient literature, art, and civilization.

¹ Candidates who take Verses need not take more than one Special Subject.

² A student may study any of these subjects without necessarily being examined in it.

§ Mathematical Moderations

This examination is divided into two Parts, the one consisting of Mechanics and those parts of Pure Mathematics which are most essential to a physicist or engineer, and the other of more advanced Pure Mathematics.

Candidates seeking first, second, or third class Honours must offer both Parts.

This course provides the natural continuation of the school studies of mathematical specialists and will be taken by Mathematical Scholars as the first stage of their University studies, whether they go on or not to the Mathematics of the Final School.

Students who take this course will find it a satisfactory preparation for the teaching of Mathematics in schools. It covers ample technical material for this purpose, except for the highest teaching of specialists in schools where Mathematics is most advanced. Those who are well advanced when they come up will take the examination at the end of their first year, less advanced students at the end of their second. The better students will at the same time read for the Junior Mathematical Scholarship.

Candidates may offer the first Part only and may be awarded Honours (unclassed). Those who desire a sound mathematical foundation for Engineering or Physics will find this a good compromise between the full course of the mathematical specialist and the bare minimum of the Mathematics of the Preliminary Examination in Natural Science. The course should not occupy more than one year.

Some students will prefer to go on from this course to one of the humane Schools—Law, Modern History, Modern Greats, or, if they know Greek, to Greats.

§ Law Moderations

This is a new examination intended to serve as an introduction to legal studies for students who intend to take the Final School of Law, and to be complementary to the Final School in certain respects.

The syllabus is so devised as to give the student a foundation for his subsequent study of Roman Law, to give him some notion of the general principles of Criminal Law and procedure, and of Constitutional Law and the growth of the Judicial System in England.

This will be the normal examination taken by students for the Final School of Law, but a few good candidates will probably come on to the Final School from Honour Moderations in Classics or Mathematics.

§ The Preliminary Examination in Natural Science

This examination is taken as their First Examination for the B.A. Degree by most of those candidates (except those who hold Senior Status) who are going on to the Final School of Natural Science, and may be taken also by other candidates in place of the more literary examinations.

The examination includes the following subjects: Mathematics, Mechanics and Physics, Chemistry, Biology (Zoology and Botany), Physics and Chemistry; and a candidate is required to pass in any two of them, but cannot take two subjects that overlap one another, e.g. Chemistry and Physics-and-Chemistry.

The examination in all these except Mathematics is partly Practical.

The choice of subjects will depend largely on the Final School that the student has in view. Medical students are required by the General Medical Council to pass in this examination (or an examination accepted as equivalent) in the subjects Mechanics-and-Physics, Chemistry, and Zoology-and-Botany. Candidates may enter for any of these subjects in the Preliminary Examination before coming into residence, and all Medical students are advised to do so, in order to give them more time for their main subjects during their residence.

The Preliminary Examinations in Agriculture and Geography and in Forestry are provided for students who are going on to the Final Examination in these subjects respectively. Both examinations are partly Practical.

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§ Preliminary Examination in Agriculture and Geography

This examination includes: (1) The elements of Physics and of either (a) Chemistry or (b) Mathematics; (2) The elements of Biology; (3) British Economic History from 1760-1914; (4) Either (a) Elementary Agricultural Science or (b) Two of the languages, Latin, Greek, French, German, of which French or German must be one.

Candidates must either pass in all four subjects at one examination, or in one or more subjects at one examination, and the rest at a later examination.

§ Preliminary Examination in Forestry

This includes (1) Mechanics and Physics and Chemistry, (2) Geology, (3) Botany, (4) Elementary Silviculture.

The candidate must either pass in all four subjects at one examination, or in one or more subjects at one examination, and the rest at a later examination.

SECOND PUBLIC EXAMINATION. PASS SCHOOL

The Final Pass School includes a variety of subjects arranged in five groups, and also the Schools of Agriculture and Forestry.

The five groups are:

- A. (The ancient world) (1) A Greek philosophical book and a Latin or Greek historical book. (2) A period of Greek or Roman history. (3) Two Latin books, one historical, one philosophical. (4) The Hebrew language and a portion of literature.
- B. History and Modern Language Group, including (1) English History or General European History. (2) The French language and a portion of its literature. (3) Political Theory and Institutions or Economic Theory and History. (4) Law Group: Contracts, or The Institutes of Justinian, or a branch of Hindu Law. (5) The German language and a portion of its literature. (6) A period of English Literature, with a study of Shakespeare and other writers.

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(7) The Italian language, with a portion of its literature.
(8) The Spanish language, with a portion of its literature.
The examination in (2), (5), (7), and (8) includes an oral examination and unprepared translation.

C. (1) Mathematics. (2) Elementary Physics. (3) Elementary Chemistry. (4) Elementary Biology (Zoology and Botany).
D. The elements of Religious Knowledge, including a study of (a) Portions of the Old and New Testament, the latter in Greek. (b) One of the Creeds and a portion of the XXXIX Articles. (c) A period of Ecclesiastical History.
(d) A selected apologetic treatise.
Candidates must take (a) and two other subjects, one of which is fixed from time to time.
E. Military History, including (1) The history of a selected campaign. (2) The Theory of War and its relation to the State.

§ Conditions of passing the Final Pass School

A candidate may pass by passing:

(1) in one of the language subjects in Groups A or B (A1, A3, A4, B2, B5, B7, B8) and in two other subjects;
(2) one of the language subjects in A or B, together with a Diploma in Anthropology, Classical Archaeology, Economics and Political Science, Education or Geography;
(3) one of the language subjects in A or B, together with the second Examination for the Degree of Bachelor of Music;
(4) one of the language subjects in A or B, together with either a Certificate of Proficiency in Cultural Anthropology, or General or Regional Geography, or Surveying, or the first examination for the Degree of Bachelor of Music, together with a third subject.

Notes. (1) The different subjects may be taken at different examinations.

(2) Candidates are not allowed to reckon for this examination subjects or texts taken in the First Public Examination.
(For details see Examination Statutes.)

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Besides these Pass examinations qualifying for the B.A. Degree there are two other Pass examinations:

§ The School of Agriculture

Candidates must offer for examination (1) The Principles of Agriculture; (2) The Economics of Agriculture, and *one* of the two following subjects: (3) (a) History of Agriculture in Great Britain and Ireland, (b) Comparative Agriculture; or (4) The Principles of Estate Management.

§ The School of Forestry

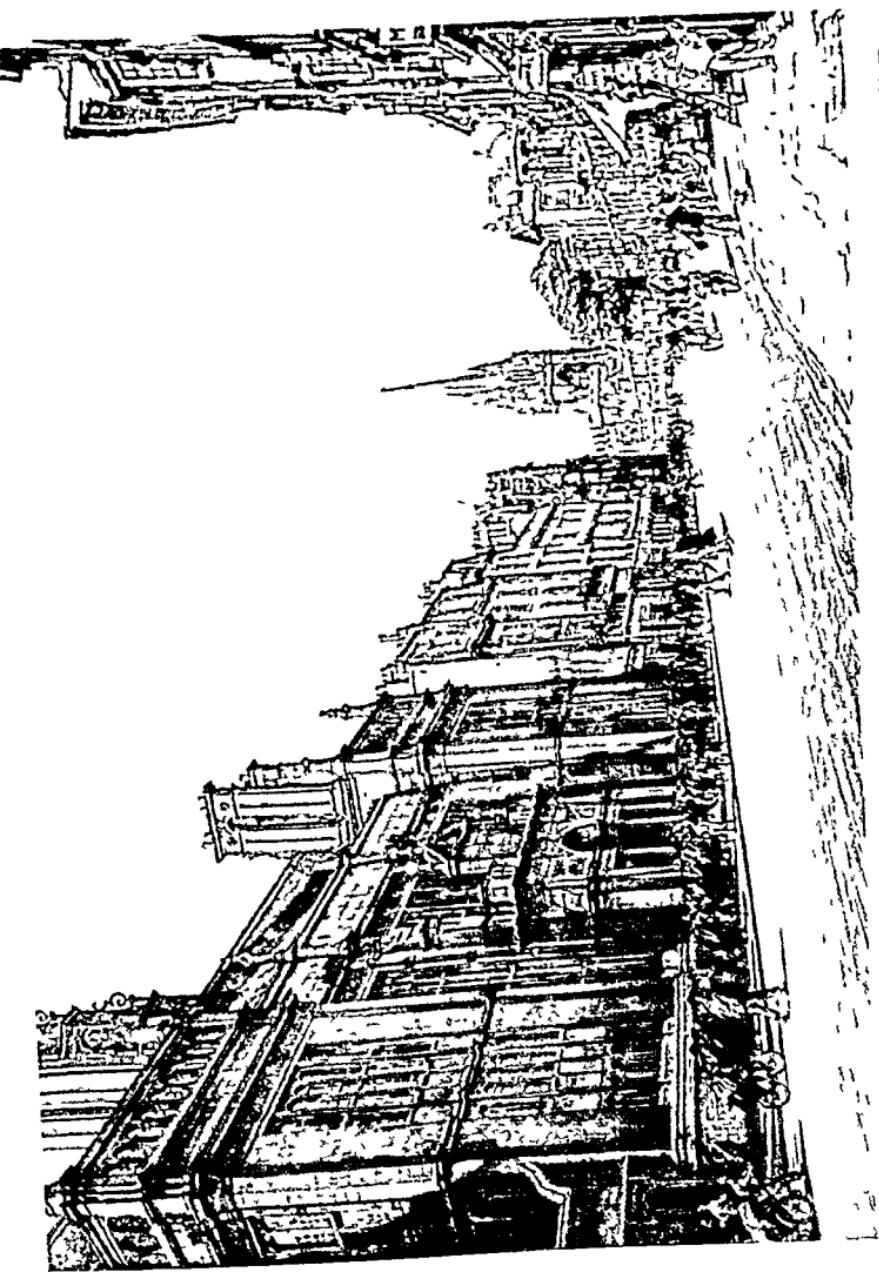
All candidates are required to have satisfactorily completed an approved course of practical work. The examination includes (1) The Foundations and Practice of Silviculture; (2) Forest Mensuration and Management; (3) Forest Utilization; (4) Forest Pathology; (5) Forest Zoology; (6) Forest Economics and Policy; (7) Surveying and Forest Engineering.

HONOUR SCHOOL OF LITERAE HUMANIORES *commonly called GREATS*

This School forms the natural continuation and completion of the course followed by students trained on the lines of classical study. Those who have time to give four years to their course for a degree will in general take Classical Moderations as their first examination. Such students will have gained some facility in the accurate and fairly rapid translation of Greek and Latin texts, which they will find of great service, and if they have taken Logic in Moderations they will have had some preliminary training for the philosophical side of Greats.

The School consists of the study of the history and thought of the Greek and Roman worlds and their literature, together with the study of Logic and Moral Philosophy both in the Greek and in the modern world.

The knowledge of the *Greek and Latin Languages* is tested in the examination not only by translation papers in the historical and philosophical prescribed texts, but by papers in Greek and Latin Prose and by passages for unprepared



19. 'SCHOOLS': THE EXAMINATION SCHOOLS IN THE HIGH, ST. MARY'S SPIRE
IN THE DISTANCE

From the UNIVERSITY ALMANACK for 1932, drawn by Muirhead Bone

translation. A good classical scholar therefore starts with a great advantage in the examination, but weakness on this side may be compensated by excellence in Philosophy and History, and men have appeared from time to time in the first class who were not in the narrow sense of the word good scholars.

The knowledge of *Greek and Roman History*, the second element in the examination, is tested by papers on selected texts and periods, of which a choice is given: and all Candidates are expected to show such a knowledge of the general history of Greece and Rome and of classical geography and antiquities as to form a background for the study of the special period and to make its history intelligible.

In the choice of his Special Period the student will be guided partly by his preference for this or that writer, partly by other considerations. Thus in *Greek History* some will be attracted by the problems of the earlier Greek world, others will choose the later period which includes the beginning of the modern world with the reign of Alexander. Either course will introduce him to writers not commonly read in schools, Herodotus in the earlier period, the Orators and Arrian in the later.

In *Roman History* there is a choice between three periods, the first confined to the age of the Republic, the second combining the period of the later Republic and the foundation of the Principate, and the third wholly Imperial, from the death of Julius Caesar to the death of Trajan. The first attracts a few students who are interested in the problems of early Roman history and who wish to study later Greek by reading Polybius. The second has the advantage of combining a study of Senatorial Government with that of the foundation and early years of the Principate. The study of this period brings out the continuity of Roman history, while the third appeals especially to those who are interested in the government of the Empire, and in the monuments and inscriptions of Imperial Rome. No student should take this period unless he is prepared to make a study of inscriptions.

The *Philosophy of Greats*, from the nature of the subject, is less clearly defined. It consists of a thorough study of two Greek books, one of Plato and one of Aristotle, and of the philosophical questions arising out of them, and also of a general study of Logic and Moral Philosophy, and Political Philosophy, including the outlines of Political Economy.

Students will have the opportunity of reading widely and discussing with their tutors as well as hearing lectures on the main questions of ancient and modern philosophy. How much of their time they devote to this part of their course must depend on what aptitude they have for philosophy. It is understood that an adequate performance in Philosophy is in general demanded for a first class from a candidate whose chief strength is in History, and an adequate knowledge of History from one whose chief strength is in Philosophy; but the principle of compensation is applied freely. The general advice to be offered is that the candidate who has no turn for Philosophy should have a thorough knowledge of his philosophical texts and have learnt to appreciate the nature of some of the chief philosophical problems, while the philosopher should master the historical texts that he offers and have at least an outline knowledge of his periods of history.

As the ground to be covered in this School is extensive, it is very important that the student should plan out his work beforehand, dealing with his Greek and Latin texts as early as possible, and leaving the higher problems of logic and metaphysics to his last year, in which he must also find time for the revision of his texts. In History, opinions differ in regard to the distribution of the work. Some tutors recommend the study of Greek and Roman history side by side; others assign Greek history to the first year and Roman history to the second. Each plan has its advantages, and a student may well follow the practice of his college.

In this School perhaps more than any other the faculty of taking good notes of lectures is important. In this every one must find his own method; the only general rule that can be

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given is that they should be written in a form that can be easily read in revision. Both in History and Philosophy a knowledge of the prescribed texts is of vital importance.

FINAL SCHOOL OF MATHEMATICS

This School will appeal only to students who are strongly interested in Mathematics, though they may get a good deal out of the course without high technical skill.

Part I. The examination consists of two parts. The first part is obligatory for all candidates and consists of six papers of a straightforward character, each of which must contain three questions of an elementary type. The syllabus is set out in great detail in the Examination Statutes and covers both Pure and Applied Mathematics. A candidate who concentrates on this part of the examination would have a wide general knowledge sufficient for most practical purposes and could quickly acquire the technical details of professional work such as that of an actuary.

Part II. All candidates aiming at a first class must also offer the second part of the examination. At least one and not more than two special subjects must be chosen from a given list. The candidate must give notice of the aspects of the subject that he has studied and of his course of study and reading to the Examiners, who will try to give him an opportunity of showing his knowledge and ability on the lines he has chosen. The examination is thus extremely elastic and is intended to favour the student who aims at doing research work.

HONOUR SCHOOL OF NATURAL SCIENCE

The Subjects included in this School are Physics, Chemistry, Animal Physiology, Zoology, Botany, Geology, Astronomy, Engineering Science. There are also four subjects that may be taken as supplementary to one of these general subjects, viz. Crystallography, Mineralogy, Anthropology, Bio-Chemistry. It is a principle of this School that a large part of the teaching and examination in it is practical, and all

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students must look forward to spending a good deal of their time on work in the Laboratories.

The majority of candidates will do the main part of their practical work in the laboratories at the University Museum, but the Botany Laboratory is at the Botanic Garden opposite Magdalen College, and the laboratories of Balliol and Trinity and at Jesus are used for Physical Chemistry, and the Chemistry for Engineering students is taught at the Christ Church Laboratory. Engineering Science has its own laboratory in Banbury Road opposite the Parks.

§ Physics

This School will have attractions for students who have an adequate knowledge of Mathematics, in view of the recent developments in the study of electricity, atomic structure, and other related subjects. Some students will come on to it from Mathematical Moderations, others from taking two of the subjects in the Preliminary Examination in Natural Science, e.g. Mathematics and Chemistry or Mathematics and Mechanics-and-Physics.

All candidates are expected to know enough Chemistry and Mathematics to study Physics with profit.

The course includes a study of the Properties of Matter, Sound, Heat, Light, and Electricity and Magnetism. These must be taken by all candidates. For the highest honours it is necessary also to take up one of the three subjects—Advanced Electromagnetism, Statistical Physics, Atomic Physics, in all of which, as in the other subjects, the examination is partly practical.

§ Chemistry

This course will naturally attract those students who have made it their special study at school and who wish to pursue scientific studies either as part of their general education or as a preparation for scientific research, whether in connexion or not with chemical manufacture or business, or with a view to practice at the Bar in scientific cases.

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It differs from the other Schools in being divided into two parts.

Part I may be taken, with special leave, at the end of the second year, by candidates who have passed the necessary Preliminary Examinations before residence, but by most candidates it is taken at the end of the third year. In order to be placed in the Class-list a candidate must take Part II in the year following his examination in Part I.

Part I includes the study of Inorganic and Organic Chemistry, and General and Physical Chemistry, with a Practical Examination. In addition to these stated subjects a candidate may take a special subject connected with Chemistry, e.g. Crystallography.

Part II consists of an experimental investigation conducted under the supervision of one of the Professors of Chemistry or some other person approved by the Board of Natural Science. As an alternative to this a student who is qualified by mathematical knowledge and has had adequate experimental training may present for Part II original mathematical work on a chemical subject under the supervision of an approved person.

Candidates for Part II are required to pass a qualifying examination in German.

§ Animal Physiology

This School is taken for the most part by men who are going on to the studies leading to the Medical profession (see Degrees in Medicine), and who will be passing their medical studies side by side with their study of Physiology. A sound knowledge of Physiology is the indispensable basis of all medical studies.

As they have many examinations in their course, it is important that students should take some of their Preliminary Examinations before they come into residence.

The Physiology School is concerned mainly with the physiology of man and the higher mammals, with some knowledge of the physiology of other types of animals.

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Students have to acquire a detailed knowledge of the structure of animal cells, tissues, and organs, particularly those of mammals, and must be prepared to answer questions on Human Anatomy and Embryology in relation to physiological problems.

The Practical Examination is concerned with the investigation of the minute structure of the animal body, the chemical and physical changes that take place in it, and its tissues, mechanisms, and nervous system.

§ Zoology

This School offers an admirable training for students who wish to devote themselves to the comparative study of animal life, whether in the field or in the laboratory, for teaching and for research; and also for those who wish to qualify for posts in Entomology, Marine Zoology, and other branches of Applied Zoology.

The School is based on the principle that the purpose of Zoological Science is 'to give a coherent account of the existing conditions and past history of animal organisms, based upon all available kinds of evidence, both observational and experimental'.

The course includes Comparative Anatomy, Embryology and Cystology, the Distribution of animals in space and time, the Classification of animals, Animal Evolution, Genetics, and Experimental Zoology.

Candidates may offer a Special Subject and may submit evidence of original research in it.

The normal approach to the School is through the Preliminary Examination in Natural Science.

§ Botany

This School offers an interesting course to students who wish to devote themselves to study and research in either pure or economic Botany, or to teaching the subject. They may find in field botany a relief from their work in the lecture-room and laboratory.

The main subjects included in the course are, the com-

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parative morphology of plants both recent and fossil, the physiology of plants, the distribution and ecology of plants, plant genetics and cytology with reference to questions of evolution, and the special study of Fungi (Mycology).

The normal approach to the course is through the Preliminary Examination in Natural Science.

The course, as at present arranged, normally takes three years, not including the time taken for the Preliminary Examination, but can be taken in less time if necessary.

§ Geology

The School provides a training for those who are interested in the study of the structure of the Earth and its successive changes. Its students must devote much attention to the study of specimens in the Museum and of rocks and strata in the field. It provides a good preparation for those who intend to devote themselves to geological research either for mining or for scientific purposes.

The subject of the School is the science of the Earth exclusive of its living inhabitants: the study of the successive morphological states through which the Earth has passed, the character, formation and distribution of its constituent rocks, and the study of the causes of the changes in their condition. It also includes Palaeontology or the study of organic remains, on account of the light that this throws on the identification of stratified rocks and their relation in time.

§ Astronomy

This School appeals to trained mathematicians who wish to make a special study of the heavenly bodies and the mathematical theories concerned with their formation and movements.

The examination includes a knowledge of the general history of Astronomy, the study of mathematical theories relating to the heavenly bodies, the use of instruments, the observation of stars, planets, and comets, and the calculations connected with them.

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§ Engineering Science¹

This School affords a scientific training in the principles which form the foundation of Engineering, and is an excellent preparation for various branches of the engineering profession. Arrangements are made whereby men who take this School can acquire some experience during their course of practical work in engineering shops.

Students should if possible take, as their first Public Examination, Mathematical Moderations, or, as an alternative, the subjects Mathematics and Mechanics-and-Physics, and if possible also Chemistry in the Preliminary Examination in Natural Science.

The course for the Schools is designed to occupy two years and the examination includes papers in Applied Mechanics, Theory of Structures, Heat and Heat Engines, Applied Electricity, Applied Chemistry, and Surveying, and, for those who wish to qualify for the Diploma in Coal Mining, Geology. Consideration is paid by the examiners to records of Drawing Office and Laboratory work, done by candidates during their course of study.

THE HONOUR SCHOOL OF JURISPRUDENCE

The Final School of Law is not primarily a professional School, but it affords an admirable foundation and discipline preparatory for both branches of the legal profession. It also provides a good mental training for students who contemplate going into business or into one of the branches of the Civil Service.

The course includes a study of General Jurisprudence and the Theory of Legislation; Roman Law, with a study of some original texts; English Law and its History; International Law; and, as an optional subject, Roman-Dutch Law.

In Jurisprudence there are no prescribed texts, but students are referred to the works of some of the principal writers on

¹ Detailed particulars of the instruction given in Engineering Science are contained in a pamphlet of which copies can be obtained on application to the Professor, Engineering Laboratory, Parks Road.

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the subject and will be guided in their reading by the direction they receive from their lecturers and tutors.

The examination in English Law for the present includes the Law of Contracts, Torts, and the Law of Land, and in Legal History candidates will be expected to know the history of these branches and of Criminal Law.

Roman Law includes a study of selected portions of Gaius, Justinian, and the Digest in the original Latin, with a general knowledge of other portions of Roman Law and its general history.

Roman-Dutch Law may be taken as an alternative to the paper on the Law of Land.

Besides papers on the subjects mentioned, the candidates' knowledge will be tested by an Essay on a legal subject.

Two general pieces of advice may be given to students in this School. (1) They should make a point of reading some of the important writers whose books are mentioned in the lists of works of reference on the different subjects, and should not limit themselves to reading handbooks. (2) They will find it interesting and useful, especially if they look forward to the legal profession, to attend the 'Moots' arranged by Law Tutors for the students of this School.

HONOUR SCHOOL OF MODERN HISTORY

This School has attracted a very large proportion of students for Honours ever since the old School of Law and Modern History was divided. During recent years the new School of Modern Greats has taken from it some of its abler students, but it still attracts a large number of students, who find in its studies the general education they desire.

The plan of the School provides both for those who take it as a part of their general education, and also for those who intend seriously to pursue historical studies hereafter. The latter class can get from it some training in the use of documents and the opportunity of more intensive study of a particular period or subject, while it gives the former an historical

framework for their future reading and some instruction in estimating the value of historical evidence.

The course for the School combines the study of English History, which includes the history of British India and of the British Colonies and Dependencies, with the study of a period of General History—and of Political Science and Economic History and Theory. But those who do not aim at a first or second class may omit Political Science or Economic History. In addition to these subjects, which are taken by all candidates, candidates for a first or second class must take a Special Subject, selected from a list which gives a wide choice both in respect of period and of the character of the subject. This subject has to be carefully studied with reference to original authorities. In addition to their other work students may offer, with due notice and permission, a Thesis on some question either in English History or in the Special Subject or Period of General History.

The study of English History required is both Constitutional and Political. The Constitutional History covers the history of England to the present day. Part of this period is to be studied with documents, part without them, a choice of periods being given.

The Political History covers the whole history up to 1885. The knowledge expected from candidates is such knowledge of the 'general outlines' as may be gathered from a modern text-book, with the knowledge of geography necessary to make the history intelligible; but candidates must show that they have studied more fully some aspects at least of political history. The papers contain alternative questions which give candidates the opportunity of showing their proficiency in the subjects that they have specially studied.

In General History students are offered a wide range of choice, from the earliest period, 285-604, to the latest, 1789-1878. Thus those who are interested in the earliest growth of the European States may take a period which follows naturally on their study of ancient history at school or in Oxford, while others may choose periods of the Middle Ages,

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the Reformation, the French Revolution, or the Nineteenth Century.

The list of Special Subjects, to be taken by all who aim at a first or second class, again offers a wide choice. Some subjects are connected with special periods of history, such as the Protectorate and Restoration or British India 1773–1805, or the Italian Renaissance, others with more general topics, e.g. Political Economy or Representative Government.

All candidates are expected to have some knowledge of Constitutional Law and of Political and Descriptive Geography. Candidates will find it very useful to be able to draw sketch-maps to illustrate their answers.

In order to encourage facility in the reading of foreign texts a paper is set of unprepared passages for translation from French, German, Italian, and Spanish, and credit is given for accurate translation in one or more of these languages. All students in this School will find a knowledge of French and German for purposes of reading very useful.

In this School, as in Greats and in Modern Greats, much depends on method, and students will do well to plan out their reading beforehand so as to allow time for each part of their work and for revision at the end. In their choice of books for reading they will be guided by the lists given in the Examination Statutes and by the advice of their tutors. It is desirable that they should read at first-hand some of the great writers on History and Political Theory and not confine their reading to handbooks.

HONOUR SCHOOL OF THEOLOGY

This School is taken mainly by students who intend to enter the Christian ministry, but it offers a varied and substantial course of study to other students interested in the study of the Bible and of Theology in general. Those who come to it from Classical Moderations will find that the discipline of that School will help them in their New Testament studies and in their writing, but those who take Pass Moderations will have more time for their Final School. A few candidates,

to their great advantage, take this School as a second School after Greats or Modern Greats or Modern History, but most students cannot afford time for this.

The subjects of the School include a study of the Old and New Testaments with a special study of certain specified portions, which in the New Testament must be studied in Greek; and a study of dogmatic and symbolic theology, in which a choice is given between two alternatives. Besides their necessary subjects most candidates take one or more subjects from a list of alternatives, which include Ecclesiastical History, Old Testament Hebrew, the Philosophy of Religion, Liturgies, Sacred Criticism, and Archaeology of the Old and New Testaments, and a variety of Special Subjects.

A study of the Examination Statutes will show that a student, while he has to devote a good part of his time to the study of the Bible and of New Testament Greek, is able to pursue his own chosen study, whether he be interested in the Hebrew language or in the philosophical, critical, historical, or liturgical side of the subject.

Students of this School not only have access to the lectures of the Theological Professors and College Lecturers, but also have the opportunity, if they choose, of hearing courses of lectures from time to time at Pusey House, Mansfield College, and Manchester College.

HONOUR SCHOOL OF ORIENTAL STUDIES

This School will appeal to those who wish to make a study of one of the great Oriental languages, either as a branch of learning, or in preparation for religious ministry, or for the purpose of educational, missionary, or administrative work in the East. In view of the large interests of England in the East it is very desirable that more students should take this School.

The languages included in the examination are Sanskrit, Arabic, Hebrew, Persian, Egyptian, Assyrian, &c.

In each the student is required to combine with the study of his main language and the history connected with it the study of another language and of a Special Subject.

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Sanskrit. The student must take Pāli, Zend, or Jaina Prākrit as his second language, show a knowledge of Indian Literature and Civilization, and must also take a Special Subject, philological or historical.

Arabic. The second language may be either Persian, Hebrew, Aramaic, or Ethiopic. The student must also offer the General History of the Caliphate and growth of Arabian rule, and a Special Subject such as Semitic epigraphy or a literary or historical subject.

Hebrew. The second language may be Arabic, Aramaic, or Assyrian. The student must also offer a period of Jewish history and a Special Subject in Epigraphy or Literature.

Persian. Students must offer as their second language either Arabic, Zend, or Armenian, and also the General History of Persia (a specified period) and a Special Subject either philological or literary.

Egyptian. The second language must be either Coptic (the principal dialects) or Hebrew or Arabic. The student must also offer a period of the History of Egypt, and a Special Subject selected from a varied list, including hieroglyphs, religious and social life, and government.

HONOUR SCHOOL OF ENGLISH LANGUAGE AND LITERATURE
This School, which is well equipped in regard both to teaching and access to libraries, will attract students who wish to devote themselves to English language and literature in the teaching profession, or who look forward to a literary life, and also those who aim at a good general education.

Most students, unless they have Senior Status, will come to it after taking either Pass or Honour Moderations. They will find it a great advantage, if they have the necessary classical training and can afford four years' residence, to take Classical Honour Moderations, which is an invaluable preparation for the study of English Literature.

The School has recently been rearranged so as to give a choice between three Courses. In all the Courses students are expected to have some knowledge of the history of the

language, and of the historical background, but in Courses I and II stress is laid on the earlier literature, and in Course III on more modern literature.

Course I may be described as a purely medieval course, which does not come down beyond Chaucer. It includes a large philological element, balanced by a knowledge of the earlier literature in the original texts. It offers opportunity to those who wish to study Gothic, Old Saxon, Old or Middle High German, Old Norse or Old French, with the literature of each.

It will appeal to those who wish to devote themselves to medieval English literature and to the study of the earlier stages of English and kindred languages.

Course II is for those who are chiefly interested in the earlier period, but wish to confine themselves to English, or to work at it mainly. The Course includes Shakespeare, Spenser, and Milton as the latest authors for study. Like Course I it includes a large philological element, balanced by a study of early literary texts.

Course III includes a study of the history of the English language from 1400 with a reading knowledge of English in all its periods, including a study of Old and Middle English texts. But the bulk of the work is concerned with the literature from Chaucer to Wordsworth, in its continuous development, with special study of Chaucer, Spenser, Shakespeare, Donne, Milton, Dryden, Pope, Johnson, and Wordsworth. This Course will probably be taken by the majority of those who enter for the School and will be found a good preparation for those who contemplate a literary life.

HONOUR SCHOOL OF MODERN LANGUAGES

This School offers opportunity not only to those who wish to devote themselves ultimately to research or teaching in one of the modern languages, but also to those who contemplate a career in commerce or manufacture, and to candidates for the diplomatic or consular service. Other students will take the School as part of their general education without

reference to any particular profession. Those who look forward to teaching the language, or wish to prepare for diplomacy or the consular service, will be well advised to take two languages in the examination; research students will probably do better to study one language more intensively.

As a preliminary most students will probably take either Pass Moderations or two of the languages in Group B of the Final Pass School; but a student who has time and the necessary knowledge to take Honour Classical Moderations will find in that course an excellent training for this School.

The School has the great advantage of access to special libraries, both that of the Taylorian Library, the centre of Modern Language teaching, and special libraries which have been collected for the students of each language.

A student may take up for this School either one language or two. In the latter case he takes one as his principal language and the other as subsidiary. The examination in the subsidiary language is less extensive, consisting of unprepared translation into and from the language, together with at least two of the other papers set in the examination for the principal language. The standard in each paper is the same for the subsidiary as for the principal language.

The languages that can be offered are French, German, Italian, Spanish, Russian, and Medieval and Modern Greek.

All candidates have to show a colloquial knowledge of the language or languages that they offer, and if they show proficiency in it are distinguished by a special mark in the Class-list. Practical knowledge is also tested by translation into and from the language and by original composition.

All candidates have also to show knowledge of the history and literature of the language. For the history of the language certain specified texts have to be studied. For the history of the literature a choice is given between three periods (in Medieval and Modern Greek between two), and prescribed texts have to be read, both from the early literature and from modern authors, among which some choice is given.

It is a principle of the School that students must show

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competence in all parts of the examination, but naturally some will be more interested in the linguistic, others in the literary side; both these interests will find their opportunity in the examination.

The study demanded in the School is of an exact and scholarly character, and the student is expected to become familiar with the general atmosphere and conditions of the country and the periods of literature that he is studying. If he can afford it, out of his own means or a travelling scholarship, he will devote part of his time to residence in the country whose language he is studying. Students who obtain honours in the Modern Language School are allowed, with the sanction of the Vice-Chancellor and Proctors, to count a term of residence at a foreign University as one of the nine terms required for the B.A. Degree. The student by combining residence abroad in a term and two vacations will thus be enabled to spend seven or eight months in the study of his selected language in its own country. This is a very important concession and will add very much to the attraction of the School, particularly for those candidates contemplating a career in commerce or diplomacy who expect to spend a substantial part of their lives abroad.

HONOUR SCHOOL OF PHILOSOPHY, POLITICS, AND ECONOMICS (P. P. E. or MODERN GREATS)

This School, like Greats, is a composite School, consisting of Philosophy and History, with Economics, but is confined to the study of the modern world. It does not require a knowledge of Greek or Latin, but does require a knowledge, for the purpose of translation, of two of the languages French, German, Italian, and Spanish, one of which must be French or German.

The School provides a valuable course for students who, without classical learning, wish to have the intellectual discipline of Philosophy, and to get the training in History and Economics that will prepare them for business, the Civil Service, or public life. It also provides a course for those

who wish to become specialists in after life in Philosophy or Economics.

It offers a greater choice of subject than most of the Schools. For the student who wishes to be an Economist, the Philosophy is a background, and vice versa for the Philosopher.

The School is taken now by a large number of students who have not learnt Greek and is found acceptable by some of the best students from overseas as well as from English schools. It has the advantage that its students have access to the lectures and tuition in Philosophy and History of the Professors and Tutors lecturing for Greats and Modern History as well as to the University and College lectures in Economics.

The course for the School consists of the study of Philosophy, Politics, and Economics. Every candidate has to make one of these subjects his main study and show an adequate knowledge of the other two.

The Philosophical part of the School includes the history of Philosophy from Descartes, with a first-hand knowledge of some of the chief philosophical writers: and the study of Moral and Political Philosophy.

The Political part consists of British Political and Constitutional History since 1760, the study of Political Institutions, and of a period *either* of Political *or* of Social and Economic History.

The Economic part consists of the study of Economic Theory and Economic Organization.

In addition to these subjects every student has to choose two further subjects for special study, with prescribed texts, out of a list which offers a wide choice in Philosophy, Politics, and Economics.

Every student has also to show ability to translate two modern languages.

Two general remarks may be made. First, success in this School, as in Greats, depends very largely on a wise distribution of studies over the time available. Every student should frame for himself at the outset, in consultation with his tutor,

DEGREES IN MEDICINE

The Degrees in Medicine are *open only* to those who have taken the B.A. Degree at Oxford. The best Degree course for students of Medicine is that of the Final Honour School of Physiology.

There are two examinations for the Degree of Bachelor of Medicine. The First Examination, in subjects preliminary to Medicine, is taken by most men, in whole or in part, while they are still residing at Oxford; the Second Examination, or at least that part of it for which Certificates of Hospital work are required, is taken when men have left Oxford.

The subjects of the First Examination are (1) Organic Chemistry in its special relation to Medicine and Surgery, (2) Human Anatomy, (3) Human Physiology. (2) and (3) must be taken together, unless a man has got a first or second class in Physiology in the Honour School of Natural Science, in which case he is exempted from the Examination in Physiology. Organic Chemistry may be taken separately, or omitted if a man has passed in Part I in the Final Honour School of Chemistry.

Before taking his examination in Human Anatomy and Physiology the student must have passed Preliminary Science Examinations, or their equivalent, in Chemistry, Mechanics and Physics, and Zoology and Botany. He should pass these, so far as possible, before coming into residence.

The Second Examination includes (1) Medicine, (2) Surgery, and (3) Midwifery, on entering for which Certificates of a man's Hospital record must be presented; (4) Forensic Medicine and Public Health; (5) Materia Medica and Pharmacology; (6) Pathology. The last three subjects may be taken separately, the first three must be taken together.

During his residence in Oxford the student will have to find time for his practical work in Anatomy.

The degree of Bachelor of Medicine carries with it the degree of Bachelor of Surgery. For the degree of Master in Surgery it is necessary to pass a written examination in

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Degree by passing in one of the language subjects of Group A or B in the Final Pass School and residing three years.

B.C.L. and B.D.

The only Degree, besides the B.A., B.Mus., and B.M., for which an examination is required from all candidates is the Degree of Bachelor of Civil Law. For the Degree of Bachelor of Divinity an examination is required from certain candidates.

§ Examination for the Degree of Bachelor of Civil Law

This examination is open to graduates of Oxford of twelve terms' standing and to students of not less than twenty-one years of age who hold a Degree in Arts, Philosophy, Science, or Law at some other University and who can satisfy the Board of Faculty of Law that they are well qualified to pursue a course of advanced legal study. Such students may be admitted to the examination not earlier than the sixth and not later than the ninth term from their Matriculation.

The examination is taken both by students who intend to practise the legal profession and also by those who intend to devote themselves to legal teaching or research or administrative work.

It is important for students to bear in mind at the outset that they are not admitted to the examination unless they can show that their knowledge of Latin is sufficient to enable them to read the prescribed texts in Roman Law in the original with profit.

The examination includes Jurisprudence and the Theory of Legislation, Roman Law, English Law, and International Law.

The Conflict of Laws may be taken as an alternative to International Law, and Roman-Dutch Law as an alternative to the English Law of Real and Personal Property.

§ The Degree of Bachelor of Divinity

To obtain this Degree a student must present a Thesis which is considered of sufficient merit by the Board of Theology. He must also first pass a Qualifying Examination in Christian

The Schools

Degree by passing in one of the language subjects of Group A or B in the Final Pass School and residing three years.

B.C.L. and B.D.

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§ The Degree of Bachelor of Divinity

To obtain this Degree a student must present a Thesis which is considered of sufficient merit by the Board of Theology. He must also first pass a Qualifying Examination in Christian

The Schools

Theology, unless he has obtained a first class in the Honour School of Theology.

The Degree is open to Oxford M.A.s and also to students who, being at least twenty-one years of age and graduates of some other University, satisfy the Board of the Faculty of Theology that they are well qualified to pursue a course of study in Christian Theology and, being admitted, pursue such a course under the supervision of the Board for at least five terms after the term of their admission. Such students cannot obtain the Degree before they are twenty-six.

The Qualifying Examination includes a study of the Old and New Testaments and Apocrypha, translation from at least two of the languages Greek, Latin, and Hebrew, Church History, Christian Ethics, the Philosophy of Religion and Comparative Religion, and Christian Doctrine.

The writer of a Thesis in Old Testament studies must pass in Hebrew in this examination, and a writer in New Testament studies must pass in Greek unless he has obtained a first or second class in Classical Moderations or Greats or the Honour School of Theology. A student who has passed the Qualifying Examination may afterwards be examined separately in Hebrew only or Greek only.

RESEARCH IN THE HUMANE STUDIES

By F. M. POWICKE

SOME people would say that the title of this chapter is a contradiction in terms. The very word 'research' suggests to them something which kills the spirit, while the word 'humane', recalling as it does that fine old phrase 'the Humanities', spells life. Many of those who use the word 'research' as a convenient and harmless description of what they regard as an essential activity in any University worthy of the name, often wish that they could dispense with it. They prefer to speak of advanced study. My subject is simply advanced study in the humanities, in the broadest sense of the term. We are concerned in this chapter with the provision which is made in the University of Oxford for the encouragement and guidance of young graduates, whether graduates of Oxford or of other Universities, in theology, philosophy, and letters, philology, history, politics, and the social studies.

The prejudice, so far as it exists, against 'research' is now very rarely a prejudice against advanced work as such, and, needless to say, it has never been a prejudice against the advancement of learning. Although it is sometimes wildly expressed, it springs from a real apprehension of the dangers which beset the systematic promotion of advanced study by young men and women. If it does not raise big questions of principle, it does call attention to problems which should not be forgotten. Something will be said about these problems in the later part of this chapter.

The Committee for Advanced Studies, which has the general supervision of the organization of advanced work and admits students who desire to work for the D.Phil. degree,¹ has issued a detailed pamphlet *Facilities for Advanced Study*

¹ Technically an Advanced Student in Oxford is a student admitted to work for the degree of D.Phil. A candidate for the B.Litt. is not an Advanced Student. In this chapter the phrase 'advanced study' is used more generally.

and Research (Oxford, Clarendon Press, 32 pages). In this pamphlet the regulations are explained, and information is given about the method of entrance to the University, fees, library facilities and so forth. Hence it is not necessary here to give all the technical details. Nor, in view of the very full chapter on Libraries which may be read in the present volume, is it necessary to describe the facilities for study to be found in the Bodleian, the Ashmolean Museum, the Taylorian Institute, and other places in Oxford.

Most of the advanced work at present done in Oxford, at least in the humanities, is done by graduates of the University. When the original statute, establishing the degree of Doctor of Philosophy, was passed (1917), the University was undoubtedly influenced, in some measure, by the desire to meet the case of graduates who come to Oxford as graduates of other Universities, British, imperial, and foreign. The changes which the War seemed to be making in academic relations hastened the development of a movement which had already begun. The organization of advanced study at home and abroad, and especially in the United States, had also influenced opinion in Oxford. The history of the last fifteen years has shown that the anticipations of 1917 were exaggerated. Graduate and advanced studies have grown steadily in the University, but they have engaged the interest of Oxford graduates even more than of graduates from outside. At the same time, the number of students from other Universities is considerable, and it is important at the outset to say something about them. Conditions in Oxford are so different from those to which they have been accustomed that graduates who come from elsewhere are frequently puzzled.

There are no 'graduate schools' in Oxford; that is to say, a man or woman who comes to Oxford to do advanced work does not become a member of a separate society. No doubt, in the scientific departments, with their University laboratories and more concentrated methods of study, social and academic co-operation creates a common life of an informal kind, although there are no scientific 'graduate schools'.

In all subjects a teacher here and there may form a group of advanced students. But officially every graduate student who comes from outside joins the University in precisely the same way as a boy or girl fresh from school. He or she becomes a member of the University by matriculating and by joining one of the societies, either a college or hall or one of the two societies of non-collegiate students, St. Catherine's (for men), the Society of Oxford Home-Students (for women). Hence the man or woman who wishes to do advanced work must apply (1) for admission to a society, and (2) for the permission of the University authorities to proceed at once with work for an advanced degree, the B.Litt. or the D.Phil. The decision on the first application rests with the society, on the second with the appropriate Board of Faculty and also, in the case of D.Phil. students, with the Committee for Advanced Studies. Applications to the Board and the Committee have to be made through the society of which the student has become a member.

These conditions of entry are not formidable if the applicant knows in good time what he wishes to do. He should apply for entrance to a college in good time because in recent years the number of people who desire to enter the University has become greater than the number of vacancies in the colleges. The authorities of the colleges have to choose from many applicants, and graduates from other Universities cannot be sure of admission.¹ The applicant should also know why he wishes to come to Oxford and in what branch of his subject he would prefer to do advanced work. If he wishes to work under a particular teacher he should get in touch with this teacher as soon as he can, so that both the college authorities and the teacher, who of course need not be, and generally is not a member of the college in question, may be ready to help forward his application to the University. If he has no particular teacher in mind, he would be well advised to

¹ Early application should be made: if possible, six months or a year before residence is to begin. Overseas students, other than Rhodes Scholars, may obtain advice and assistance in the choice of a College from H. S. Williamson, M.A., Indian Institute, Oxford.

consult the professor of the subject. One of the Boards of Faculty, that of Literae Humaniores, requires that a candidate shall first be personally interviewed by a professor of the subject to which his branch of study belongs. Some other Boards, e.g. that of the Faculty of Modern History, advise candidates to adopt this course.

There are two research degrees in Oxford open to advanced students in the Faculties of Theology, Literae Humaniores (i.e. classics, philosophy, and ancient history), Modern History, English, Modern Languages and the new Faculty of Social Studies which, so far as research is concerned, is more especially concerned with politics and international relations, and economics. These are the degrees of Bachelor of Letters and of Doctor of Philosophy.

The degree of B.Litt. was established in 1895. If the candidate is a graduate of the University, he can obtain this degree in a comparatively short time. He may submit his thesis, which is usually the only exercise demanded of him, at the end of his first academic year of study—according to the regulations, not less than six months after the subject has been approved,—or he may spend nearly three years upon it. If the candidate is not a graduate of the University, the procedure is a little more complicated. He may still present his thesis in a short time and obtain a B.Litt. certificate, but he cannot take his degree until he has satisfied the requirements of residence for six terms as a member of the University. In exceptional cases candidates have presented their B.Litt. thesis early, and obtained the certificate in order to qualify at once as Advanced Students in the technical sense and to begin work for the degree of D.Phil.; but normally the candidate for the B.Litt. is well advised to spend the six terms in preparation for it.

The candidate must first be admitted as a probationer-student. He must make application to the Secretary of Faculties at the University Registry through his Society or prospective Society. (That is to say, he can do this before he actually comes into residence, if he is not already a member

of the University.) With his application he must send certificates and letters of recommendation from his previous University, and a statement of the branch of study which he wishes to pursue. All these documents should be submitted through his Society or future Society, i.e. college or hall or society of non-collegiate students, which will add its own letter of recommendation. The Secretary of Faculties will then lay the documents before the appropriate Board of Faculty. It is at this stage that the results of preliminary consultation are found to be so important. For it is the duty of the Board to appoint a supervisor. It is true that the student is so far only applying for admission as a probationer, and that his definite reception as a candidate for the B.Litt. has to be considered some weeks later; but in most Faculties the supervisor appointed for the period of probation continues to act later. Moreover, except in the English School, it is not usual to draw a hard and fast line between the preliminary studies required of a candidate and the early stages of work upon the subject chosen for study. The supervisor appointed in the first instance normally directs the work of the candidate throughout his course. As the supervisor is in the position of a tutor, responsible to the University, and the only person in a position to see that the student makes progress and does not lose his way, the task of selecting him is often no easy matter. But if the Board has before it authoritative information and suggestions about the candidate, and especially if it knows that a suitable supervisor has already been approached and is willing to act, it can act with knowledge. It knows that the candidate has had advice, that his subject has not been chosen ignorantly or hastily, and it may know that a particular teacher would be glad to have him as his pupil. Experience has shown that these informal preliminary discussions are necessary if mistakes and delay are to be avoided.

It is hardly necessary to add that these considerations apply to Oxford graduates no less than to graduates who come from elsewhere, and to candidates for the D.Phil.; even more than to candidates for the B.Litt. degree.

The procedure in applications for admission as an Advanced Student in the technical sense, with a view to the degree of D.Phil., is very much the same as that just described. The Committee for Advanced Studies grants admission, sometimes after consultation with a Board of Faculty; but the appropriate Board appoints the supervisor. Here there is no probationary period, for admission to study for the doctorate is given only to students whose capacity for research is believed to be proved. Graduates of other Universities are considered on their merits. A candidate who has already obtained the B.Litt. certificate or has taken first-class honours at Oxford is seldom refused. The minimum period of work for the degree is six terms, of which three must in any case be spent at Oxford. Recent legislation has made it somewhat easier for students who have previously studied at Oxford to carry on their work for the degree elsewhere after the first year. A Rhodes Scholar, for example, who has already studied for two years in Oxford as an undergraduate, can now be permitted to return home after one more year and finish his work for the doctorate outside Oxford. In many other cases it is advisable to allow a student to spend part of his time elsewhere, especially if he requires to study manuscripts. The thesis need not be presented within the six terms or two academic years, but may be sent in at any time within twelve terms (four academic years) from the date of admission to study for the degree.

The degrees of Bachelor of Letters and Doctor of Philosophy are described in the pamphlet issued by the Committee of Advanced Studies as 'of the same nature'. The standard required for the doctorate is higher, in theory considerably higher, than that required for the degree of B.Litt. The examiners' certificate states that a successful dissertation for the D.Phil. degree is 'an original contribution to knowledge set forth in such a manner as to be fit for publication'; whereas, since the institution of the D.Phil. degree, the examiners' certificate does not describe a successful dissertation for the B.Litt. as an original contribution to knowledge, nor as being

in a form fit for publication. It is not easy to define the relation between the two degrees more exactly, for, while the standard of the work for the degree of D.Phil. has on the whole been maintained at a high level, the standard of work done for the B.Litt. tends to vary. 'The man', it has been said, 'who gains the B.Litt. is understood to be competent to research; the man who gains the D.Phil. has researched so successfully as to have made contributions to his subject which deserve to be made known to other scholars.' This is certainly the intention. A student of history, for example, can get the B.Litt. by showing that he can handle original authorities competently; whereas, if he is a candidate for the D.Phil., he will be required to go farther—to master the unpublished material within a limited range or to pursue critical investigations which will have value and significance in the eyes of other scholars. But the keen student who can devote eighteen months or two years to a subject and who finds new material or is faced by unexpected problems does not consider minimum requirements. Some exercises for the B.Litt. degree have reached a standard hardly distinguishable from that expected in a doctoral thesis. They were very good indeed and, in one form or another, most of them have been published. The capacity and the desire to pursue original investigation fortunately refuse to adjust themselves to the limits of regulations and the expectations of examiners. The differences in quality between one piece of work and another may cause some perplexity, but nothing could be worse, nothing could do more harm to the spirit of research than a dull and regulated uniformity of achievement. If the performance of the keen student tends to raise the standard, so much the better. It would be fatal if the standard were fixed by the level which the indifferent student can attain.

At the same time the difficulty of fixing a definite relation between two degrees of the same kind has raised the question whether the one should not be made an avenue to the other. The Board of Faculty of English Literature has approached the problem of advanced study with this possibility in mind.

It has used the powers allowed by the statutes and regulations to include in the course for the degree of B.Litt. an obligatory examination, followed by a dissertation. It had no power to compel candidates for the D.Phil. to take this course, but, in the words of the Merton Professor, 'most men find that they had better make sure of the B.Litt. first; and few get beyond it. . . . The course of instruction "preparatory to research" has given a more certain value to the B.Litt. degree; and its effects on the standard of scholarship required for the D.Phil. degree are no less clear.' This interesting development is attractive. It suggests a new way of organizing advanced work, which, in circumstances not hard to imagine, the University might wish to adopt and extend as an alternative to the more general system. On the other hand, the new School of English had to face peculiar difficulties, and it was partly with the intention of meeting these difficulties that compulsory classes were arranged in Elizabethan handwriting, the establishment of texts, bibliography, the history of editing and so on. The course is a formidable barrier against a particular kind of student who, once admitted, is rarely amenable to intellectual discipline. For the present the other Schools prefer their more elastic system, although at least one, the School of Modern History, has begun to appropriate the very important general principle which underlies the English scheme of study. The provision of definite and systematic instruction preparatory to research is not, indeed, a new departure. Teaching in the method of and aids to advanced study has frequently been given in the Schools of Theology and Modern History. It pervades the study of the ancient classics and is presumably the *raison d'être* of the department of classical archaeology. Instruction in palaeography, diplomatic, bibliography and the methods of historical study has been given regularly for some years; in the first two subjects for many years. But now that advanced studies as such have a definite position and are subject to systematic control in the University, the need for more systematic general instruction in the aids to study is increasingly

realized. So far only the English School has made attendance on instruction of this kind compulsory. Compulsory attendance implies a test or examination if it is to be genuinely effective, and it is open to debate whether suitable tests could be devised for the candidates in other Schools, or, if they could, whether they should be imposed. But it is all to the good that deliberate and systematic provision should be made for such instruction. Every graduate student in medieval history, for example, is encouraged to attend courses in bibliography, palaeography, and diplomatic. Courses are also given on the methods of historical study, the Public Record Office, and from time to time on the bibliography of particular aspects or periods of modern history. In addition to the direct benefits obtainable from this instruction, those who attend are informally brought together. They are surrounded by helpful books and guides in a room which they can regard as their own; and they learn much from incidental talk with each other and with their teachers. They are no longer isolated researchers, whose only connexion with the academic life of the University is a periodic interview with their supervisors. The extension of facilities of this nature would be the best way of combining with the college life of Oxford some of the advantages of the great graduate schools of the American Universities.

A detailed survey of the advanced work now done in Oxford would make this chapter too long. The present writer will be pardoned if, as an illustration, he gives some account of the work done in the School with which he is most familiar, the School of Modern History. The subjects which are comprised in this School include the various aspects of medieval history. At the end of Michaelmas term 1931, 30 post-graduate students in history were working for the B.Litt. degree, 20 for the D.Phil. In addition historical or quasi-historical subjects were being investigated by some of the candidates who had been accepted by the Boards of Theology, English, &c. Eight of the 30 candidates for the B.Litt. were medievalists, of whom all but one had chosen subjects in

British history. Although the 22 modernists had chosen a variety of subjects, nineteenth-century history or some aspects of economic history were the main fields of study. Of the 20 D.Phil. candidates, 8 were medievalists, 12 modernists. In modern history the chief subjects chosen were in colonial, economic or social, and diplomatic history.

The 50 candidates for the two degrees were divided among 26 supervisors; but 10 supervisors were responsible for 31, and 5 for 21, of the total. One supervisor had 8 pupils, 1 had 4, 3 had 3, 5 had 2, 15 had 1 each. One candidate was working in Paris under a French professor.

Although graduate work in history is distributed over a great variety of subjects and is supervised by a large number of teachers, the figures given above show that there is a definite tendency towards the grouping of subjects and some tendency to the formation of schools or departments of study under particular teachers. The later Middle Ages (especially the ecclesiastical, local and social aspects), the seventeenth century (constitutional, social and colonial), and the nineteenth century (economic, diplomatic and imperial) are the favourite periods. Nearly all the work done, except in nineteenth-century history, is on British, not on foreign history, but specialization is beginning on foreign history in the seventeenth century.

In history, as in other schools, the method of instruction is left to the discretion of the supervisor. Usually he sees his pupils about once a fortnight during term, for the discussion of difficult points, and the criticism of rough drafts of parts of their theses; but these periodical formal interviews should not be, and as a rule are not, the only expression of his interest in them and responsibility for them. His position corresponds to that of a college tutor who studies the idiosyncrasies and needs of the undergraduates entrusted to his charge. He finds that, while one man is almost sure to go right and has a *flair* for original work, another, if not carefully directed, is at first sure to lose his way, or to have difficulty in expressing the results of his investigations in lucid and

orderly English. As we have seen, no specific tests or examinations are required until the thesis has been presented and the examiners have been appointed by the Board of Faculty; but, as we have also seen, some progress has been made in the provision of instruction in method and the helps to advanced study. Leave of absence for the purpose of research in the British Museum, the Public Record Office, and other libraries or archives is readily granted to students, if their supervisors are satisfied that they have reached the stage at which they and their subjects will profit by it. The Committee of Advanced Studies has made arrangements with the Institute of Historical Research in London, whereby six students each year can be admitted free of charge to membership of the Institute, including the use of its library and attendance at seminars. Finally, the Committee is prepared to assist the publication of really good work and has given financial support to a new Oxford Historical Series primarily intended for the publication of theses which advance our knowledge of the structural development, political, ecclesiastical and economic, of British History.

Some reference has been made to the difficulties which beset any attempt to organize 'humane research'. A visitor from Harvard or from the great schools for advanced study in Paris would probably declare that, except in the English school, he could see little, if any, evidence at Oxford of organized research in the humane studies; yet in Oxford itself the gradual developments of recent years have been observed in some quarters with anxiety, in others with impatience. We have our idealists on both flanks as well as in the centre. Some would like to see the establishment of a fully articulated system of graduate instruction, and claim that here the ancient University would find its true vocation and fulfil its highest purpose. Others would like to leave original work to the free impulse of those who have won research fellowships or studentships or who care to devote their scanty leisure to the advancement of learning. 'The wind bloweth where it listeth', and Oxford, it is argued, being by its very

nature the home of learning and of noble facilities to higher study, will never fail to inspire. Oxford, as usual, has adopted a middle course to which it has already given its own peculiar direction, illogical no doubt, and rather untidy, but capable of very effective results. The humane studies in Oxford, unlike the natural sciences, have never been 'departmentalized'. In their laboratories and University departments the natural sciences have had no difficulty in developing, as the inevitable culmination of their work, strongly organized schools of research. Similar developments may well be expected in the Faculty of Modern Languages, which is in effect a department with a home of its own, as it obtains more freedom of movement and works out a common policy. In the older schools, firmly embedded in the colleges and the tutorial system, facilities for graduate work have been neither natural nor inevitable. The provision of them has involved a conscious effort in which the teachers responsible for instruction in the subjects might or might not take an active part. In these circumstances the idea of a separate organization, of a kind of 'graduate school' for the humanities, has naturally found favour in some minds. Yet a graduate school, which would require a staff and equipment of its own, might, if prematurely founded, find itself isolated from the vigorous traditional system on which it must depend for its success. Hence the idealists of the centre are content to make the best of what they have got, to profit by the stimulus which idealists on the one side can give, and to take heed of the warnings which come from the idealists on the other. But, if the progress already made is to be maintained and extended, their idealism must be genuine and positive, not a mere timid advocacy of research.

Advanced study in Oxford has left far behind it the mixed motives which secured its first recognition as an integral part of the academic system. It has grown because there was a need for it. It is essential to understand as well as to recognize this need. The University does not provide facilities for the young graduates who are idly looking about for something

to do or who think that a year or two spent in half-hearted research may give them higher credentials; it provides facilities for the keen student who, without too much concern for ultimate values, has a strong desire to read more widely and to do a piece of work of his own. The student of this type is indifferent to the argument that he may be wasting his time. He has gone a little way, he sees that he has hitherto merely scratched the surface of his subject, and he has a genuine craving to go deeper. At the same time he feels the need of guidance. He would prefer, if possible, to do something which will be of value, and he wishes to be brought in touch with those who know what has been done and is being done elsewhere and what needs to be done. He may not be able to devote all his time in the future to study, but, before going down from the University, he wishes to satisfy his desire to work at his subject, and, if he can, to prepare for a modest contribution to learning. So long as there are people of this kind, and there always is a number of people of this kind in a healthy University, it is the duty of the University to give them their opportunity.

The University and the colleges have done much to provide financial opportunities. The University scholarships given by the General Board of the Faculties, the special endowments such as the Bryce and the Amy Mary Preston Read scholarships, the Senior Demyships of Magdalen, the Harmsworth scholarships of Merton, the Senior scholarships offered by Christ Church and other colleges, the Senior Scholarships of the Goldsmiths' Company, the continuation of College, School, State and local scholarships or exhibitions for a year or so after graduation, have made it easier for scores of students to do some advanced work. But this sort of opportunity, while essential, is not the chief way of providing facilities. The best and more disinterested 'researchers' are not always those who have secured these emoluments, just as they are not always those who have been placed in the first class in the schools. The opportunity which the University is especially bound to give is direction, the companionship

and encouragement of older scholars, and some acquaintance with the movements of learning in the world of learning. The scholars who believe in 'humane research' can best help by advising those who really desire to engage in it, by bringing them to the notice of the persons especially responsible for the direction of it, and by acting as supervisors in their own field of learning. The supervisor, indeed, is the pivot of the Oxford system. He can make or mar it. He can not only get the best out of his individual pupils, he can build up a little tradition of his own and form a group about him. The most encouraging development of late years has been the gradual tendency to concentration upon particular fields of study under the direction of particular scholars. This development has done something to check a diffusion of effort in all kinds of study under scattered supervisors who often can only take a perfunctory or external interest in the work of their pupils. College authorities can do much to assist the tendency towards concentration.

Attempts have sometimes been made to define the kind of subject appropriate to a course of advanced study, but conditions vary so much that only a few generalizations can be made with safety. The student should certainly take care to have the advice of experienced people. He should, as a rule, avoid big subjects, especially if he cannot look forward to a long period of uninterrupted study; and he should avoid the investigation of minute detail which does not encourage the wider reading and reflection which are essential to mental progress. His subject, in short, should be definite enough to make him concentrate, and at the same time be so significant that, in order to deal with it, he must deepen and extend his general knowledge. The application of this general rule depends upon the qualities of the student, the extent of his previous reading, the nature of his subject, and the help which his supervisor can give. Nothing, for example, would be more foolish than to suggest, as a general rule, that students should—or should not—edit a text. The nature of the text, the aptitude of the student, and, by no means least, the inten-

tion of the supervisor in suggesting the text and the stimulus which he can give must be considered before we can judge whether a piece of work of this kind is or is not suitable.

The statutory provision made for advanced study in Oxford, if not very broad, is adequate to enable students to take advantage of the great facilities which Oxford, as Oxford, offers. When all is said, Oxford is a place of learning, and its finest work is done by trained scholars, who have won a scholar's reputation in the world, and who work in one of the great libraries of the world. The best gift which Oxford gives the young scholar is the opportunity to breathe this atmosphere. In it knowledge is pursued for its own sake; in it, the genuine student finds himself and realizes that the degree is not an end in itself, but a certificate of efficiency, a convenient testimony to a period of disciplined effort. It is true that, here also, much remains to be done. The old facilities are not always nicely adjusted to the new needs. Some of the new needs, we are assured, will be met in due course. In the meanwhile, Oxford has made it easier for hundreds of young students to get some experience of the pursuit of advanced learning. This is a positive achievement, far more important than the merits or defects of the academic mechanism. The best way to make sure of wise advance in the future is to use existing opportunities to the full in a spirit of confidence.

LIBRARIES

By G. N. CLARK

ALMOST every society and institution in Oxford has its library, large or small, and every student will naturally pick up in the first few days of his work the necessary information about the libraries which concern him most directly, such, for instance, as the library of his college or that of his laboratory. Thus it would be superfluous, if it were possible, to attempt in this handbook anything like a complete guide to each of the libraries. It would be misleading to give summaries of their contents, because their contents are always growing, or of their regulations, because regulations change. Detailed information about times of opening, admission of readers, conditions of use of the libraries and so forth when they are not given in the current *University Calendar* should be sought at the libraries themselves. Here we give merely a general survey of the library provision available, paying attention chiefly to the libraries which are important for a variety of purposes and assuming that the specialist will have other sources of information about the specialized library.

The present time is not the most convenient for making such a survey because it is a time of unusually rapid growth and reorganization. The many libraries of Oxford grew up independently to satisfy the needs of their separate owners and users, and this free growth without common control had the advantage that each small working unit, whether a college or a research institute or a museum, had at its command the books most obviously needed for its purposes. It meant a great saving of time and machinery. Unfortunately, however, it meant also much waste, overlapping, and loss of opportunity. As the libraries grew in size and their upkeep became more expensive it gradually became impossible for them to go on quite as independently as the libraries of a number of book-collectors who have nothing in common except that they

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happen to live in the same city. In one thing after another the need for co-ordination has become clear. Certain once independent libraries have been absorbed into the organization of the central University library. Others, still independent, are becoming increasingly used to co-operation in one or other respect, whether in buying or cataloguing or otherwise, and it is to be hoped that these businesslike tendencies will continue. Although administratively Oxford is unlikely ever to have a single library system, still there is no reason why she should not have, broadly speaking, one library for each purpose and one purpose for each library. As progress is made in this direction, some of the complications mentioned in the following pages will disappear.

Our survey must begin with the Bodleian group of libraries. This consists of six or seven collections of books in half a dozen different buildings. They are united not only by the fact that they are under the same administrative control (which is a matter of little or no immediate concern to the student) but also by each having its separate function as part of a coherent whole. Together they may be said to form the central University library, or the University's system of libraries except for those which are under separate specialist control. In number of books their total probably rather exceeds that of all the other libraries in Oxford taken together: to give a figure which is necessarily vague, the estimated number of volumes in this group of libraries exceeds a million and a half. As we notice the libraries one by one we shall see how it is that the University has not one central library but a group: some of the libraries of the group are offshoots from the main collection, others formerly independent units which have been brought into the scheme of common management, others neither quite one thing nor quite the other; but the whole group is dominated by the Bodleian, which is the main library, the largest and the most important.

The Bodleian, as everybody knows, is one of the great libraries of the world. It takes its name from its founder Sir Thomas Bodley, who, if this great achievement had not

outshone everything else that he did, would have been remembered as a scholar and diplomatist in the time of Queen Elizabeth and King James I. The sixteenth century had been a disastrous period for Oxford in many ways, and at the end of the time of religious strife there was nothing left of the University library except an empty room. This great room, now called Duke Humphrey's Library, after Humphrey Duke of Gloucester, a principal benefactor to it in the old medieval days, dates back to the fifteenth century and is the central core of the Bodleian. Sir Thomas Bodley did much more than fill it with books. With remarkable foresight and remarkable attention to detail he planned extensions of the building, provided an endowment, and drew up statutes for the government of the library which gave it a place of its own in history. Although it was the University library, it was to be open to the scholars of the whole world. Thus it has been called the first practically public library the world had seen. A still more remarkable innovation was Bodley's agreement with the Stationers' Company, which then controlled copyright and the right to publish in England. The company made the library a grant of one perfect copy of every book printed by them. This was the beginning of the 'copyright privilege' which, in various forms corresponding to the successive systems of copyright law, the Bodleian has enjoyed from that day to this. It is shared now with several other libraries, but they all received it later, and the acquisitions made by this means in the early days of the privilege contributed many treasures to the Bodleian which could hardly have been acquired afterwards by any means.

In its long history since Bodley's time the library has accumulated not only a great wealth of books and manuscripts, but also furnishings, pictures, and relics of every kind, with all the associations and traditions which cluster about a valued and venerable institution. It is a place of pilgrimage for those who study the history of libraries, the history of learning, the rich continuities of English life. For the moment, however, we are concerned with it merely as an instrument in

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the service of the studies of the University. As such it consists, roughly speaking, of the books in all subjects except modern languages and some branches of archaeology and fine art, though, as we shall see later, there are special buildings or parts of buildings within the Bodleian system for books relating to mathematics, natural science, law, British India, American and imperial history. Only the most advanced graduate students will need more than the Bodleian offers in these subjects. For some there is supplementary material in other Oxford libraries, for others it is necessary, in order to find the more recondite foreign materials, to go to the British Museum reading-room in London. In none of its subjects does the Bodleian willingly fall short of the standard of a really first class university library, and where such a falling short is discovered, efforts are or will be made to rectify it. It does not indeed deal equally completely with all its subjects, but only in the sense that it cannot in all maintain the very special level, far above that of any but the greatest university libraries, which it has in some. These are naturally the subjects most closely related to its special treasures. The manuscript collections number about 40,000 volumes, 8,400 rolls, and 15,300 charters, and there is a full provision of the literature needed for working upon them. In the same way the library is strong in the studies covered by the early works acquired under the copyright system and also by the rich benefactions which have made its printed books rival the manuscripts in rarity and value. This function of the Bodleian as a storehouse of unique and original materials is what makes it famous and what above all attracts scholars to it. Besides the official catalogues there are a number of other books which serve as guides to special portions of it, and as may be seen by a glance through any issue of the *Bodleian Quarterly Record* there is no end to the discoveries of fresh rarities in forgotten or unexplored parts of the old collections. Nor is there any check in a flow of accessions so copious that it is hard for cataloguing to keep pace with it.



20 IN THE BODLEIAN, 'DUKE HUMPHREY', THE OLDEST
PART OF THE LIBRARY

In a great and ancient depository like this there is hardly any field of human knowledge which is not represented by some greater or smaller body of raw material for research; but, needless to say, the Bodleian is stronger in some than in others. It does not offer special attractions to the student of contemporary or very recent economic and political affairs. It has not the resources for forming very ambitious collections of the official publications of foreign governments, and even in the ordinary literature of modern studies it is not as strong as might be wished. Even here, however, it has occasionally something to offer: it is strong in continental academic dissertations, and now and again will be found to have something of this sort which is not available elsewhere in England. Its greatest strength, however, lies in earlier centuries. By way of illustration only, we will mention some of the departments in which it has much to offer in the way of material for research. First there are medieval studies generally. The great growth of interest in recent years in the history of medieval learning, thought, and science has caused a revival of interest in many medieval writings which were for long neglected, and the most fruitful method of study has proved to be that which keeps closely in touch with the biographical materials and the records of the institutions, whether universities or religious orders, to which the writers belonged. For such work the great medieval centres of learning are the most favourable places, and not least Oxford, the oldest British university and the home of more than one medieval movement of thought which had a world-wide influence. This, however, is only one of the fields in which medieval work at the Bodleian is active: the vernacular literatures, the arts, economic and legal history are all represented here by stores of precious information. As might be expected British topography and local history take an important place. In its early days the Bodleian acquired the collections of some of the great antiquarians. The manuscripts they rescued and the notes they took from manuscripts now lost are historical sources which cannot be superseded. There are many later

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accessions to supplement them, and the Bodleian is one of the depositories in which, under the national scheme devised by Lord Hanworth as Master of the Rolls, manorial documents, those invaluable sources for social history, may be placed in safe keeping. The Oxford diocesan records are here, still largely unused. From the sixteenth and seventeenth centuries there are large and very important classes of manuscripts similar to those in the British Museum which, but for the laxity of the practice of those days, would form part of the national public records. The amount of diplomatic correspondence, for instance, is considerable. Finally in the domain of English literature, from the earliest to the most recent times, besides manuscripts of importance there are printed books which cannot be found elsewhere. It would be easy to fill pages with lists of the surprising possessions of the library: the earliest manuscript of the *Chanson de Roland*, Edward Fitzgerald's own manuscript of *Omar Khayyám* (one item from the collection of Oriental manuscripts which is the largest in Europe), the only known copy of the earliest printed work of Shakespeare. All this, however, would be merely illustrative. For any full idea of the matter it is necessary to turn to the printed catalogues and other guides, which are to be seen in all learned libraries in Europe and America. The student in search of a topic for research will doubtless have made use of these books before deciding to come to Oxford.

The advanced work done in the library is very different in method from the more casual and everyday reading, and we must now explain the arrangements for the different kinds of study. A fuller explanation is in the *Manual for Readers*, which contains a plan and other necessary information. It is presented to any reader who asks for it at the library. A small charge is made for the *Cataloguing Rules*. The present Bodleian catalogues of printed books are not easy to understand, and an hour spent over these rules will save the regular reader a good many periods of five minutes. The rules of the Bodleian do not permit lending. If it possesses a book,

the reader may be sure that that book is in the building. Wherever it may be situated, whoever is using it at the moment, the reader with tact and a little patience can count on seeing it. On the other hand he will not search for it himself: the library is not at present arranged for the direct access of the reader to the shelves where most of the books are stored. Investigations are, however, in progress as to the possibility of increasing the number of books which may be made directly accessible. In order to become a reader the student will present himself, with an application form signed by a Master of Arts or other responsible person, in the main Bodleian building. Here he is at the centre of the Oxford library world. Duke Humphrey's Library is still the place for reading the Bodleian manuscripts, and it is the usual place for working at the great manuscript collections of the Oxford colleges. Six of these (Brasenose, Hertford, Jesus, Lincoln, New College, University) actually store their manuscripts in the Bodleian building. The others have an arrangement by which, on the filling up of a form provided there for the purpose, their manuscripts are sent to the Bodleian to be read or photographed. Beyond Duke Humphrey's Library on the same floor is the seventeenth-century addition known as Selden End, in which are ranged on open shelves a number of books of reference, including those most used by readers of manuscripts. A new reader is recommended to make a general inspection of the reference books on the open shelves, of which there are altogether a large number in the various rooms, but of which the arrangement is at present somewhat dispersed.

Two considerable blocks of them will be found on the story above the old reading-rooms. On that level, on the north and east sides of the quadrangle, is the general Upper Reading Room, a large, light room with 24,000 volumes of books and periodicals, historical, topographical, and philosophical, about the walls. Here is also the main catalogue. This has two parts, a series of volumes with manuscript entries under the names of the authors for all books printed

before 1920, and a smaller series with printed entries for later books. It should not be forgotten that there are also subsidiary catalogues. For foreign periodicals it will save much time to use the excellent and handy list of *Current Foreign and Colonial Periodicals in the Bodleian Library and in Other Oxford Libraries*. A subject-catalogue of recent accessions is displayed in the Upper Reading Room. The manuscript catalogues are naturally to be consulted by the entrance to Duke Humphrey's Library: their arrangement is complicated and should be learnt from the special leaflet of *Instructions to Readers* issued free of charge by the Department of Western Manuscripts. One type of catalogue familiar in other countries the Bodleian, like other great English libraries, does not possess: there is no general subject catalogue. The preparation of such a catalogue would be a vast undertaking, and the method of research which has grown up in England has assigned a somewhat more limited sphere to libraries and their catalogues than that undertaken by, say, the Berlin Staatsbibliothek or the Library of Congress. For the purposes of really advanced research it has indeed been necessary always to supplement the great subject-indexes even of those libraries by recourse to the other available lists of authorities and other bibliographical means of reference. To some students from overseas who have been accustomed to rely largely on the subject-catalogues of the libraries where they have worked, the absence of such an aid in the Bodleian is at first embarrassing, but they will find that the gap is partly made good by the hand-lists of books on particular subjects which may be used on application to a member of the staff and give the titles of all books added to the library since 1882.

On the southern side of the quadrangle at the Upper Reading Room level, is the English Reading Room, a similar but smaller room, intended mainly for graduate and undergraduate students of English, and furnished with the texts and books of reference which they most commonly require. One more object among the contents of the old Bodleian

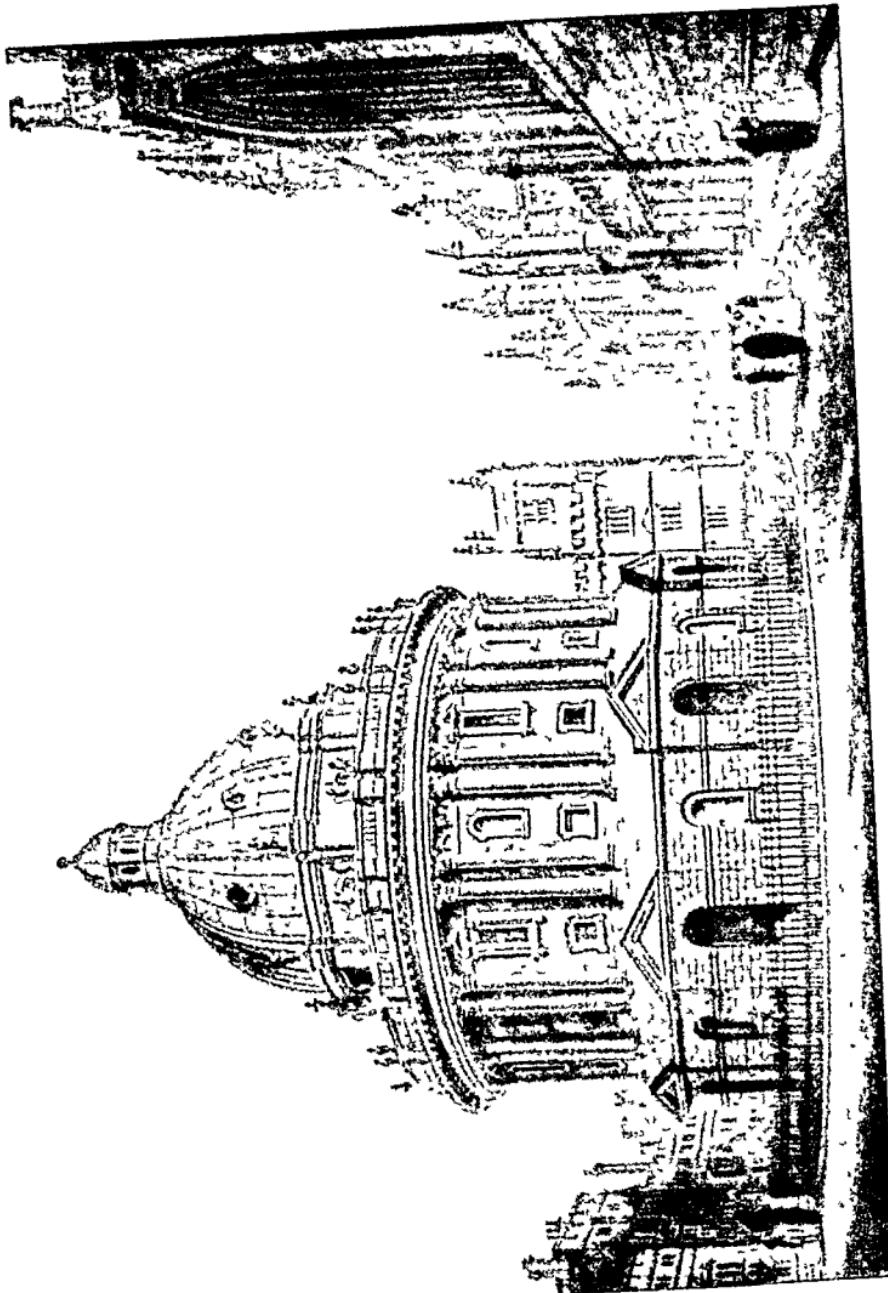
building should not be overlooked: near the manuscript catalogues is a Suggestion Book, and it is to be hoped that no one will complain of the library for lacking any particular book until he has at least, by entering the title here, given the authorities the chance of making the deficiency good or giving a reason for not doing so.

Thirty yards away from the old Bodleian building, to the south of it, but connected with it for purposes only of service by an underground tunnel, rises the great domed bulk of the Radcliffe Camera. Built in the eighteenth century for a different use, this is now a supplementary reading-room for the Bodleian. It contains in wall-cases, of which the keys are available to graduates on application to the staff, a considerable select collection of books on the subjects of the honour schools of the University. Although it is the principal undergraduate reading-room of the University, it will be found by no means useless for more advanced students, though during the period of Bodleian reconstruction it has no copy of the main catalogue. One attraction is that it is kept open to a late hour at night, another that it is near the main storage place for the most modern books. Thus although books are sent across from the Camera to the Bodleian for the use of readers and, except for rarities, Bodleian books may be sent to the Camera, a number of readers find it more convenient to go to the Camera when they wish to use modern books, at any rate for rapid consultation or for looking up references. Each reader will find his own experience the best guide; but in any case it should be remembered that, even if time can be saved by reading in the one building rather than the other, the service of books is apt to entail delays and no one should put himself in the position of having to sit with nothing before him on the desk vacantly waiting for a book to be delivered. It is always in the reader's power to avoid this, since books may be reserved for future use, or ordered by post or by placing a slip in a box provided for the purpose on the outside of the south gate of the quadrangle.

Next after the Bodleian proper and the Radcliffe Camera in

importance comes the *Radcliffe Science Library* which, although under the same management, is at a distance from them, close to the Museum and convenient for the science departments. This may be called the scientific section of the University's library. It is a select library containing those of the books published on scientific subjects which are actually needed for University work, the rest remaining in the vicinity of the Bodleian, where they are included in the catalogue. The Radcliffe Library has three floors. The two upper have reading-rooms for the Physical Sciences and for the Biological Sciences and Medicine, with reference-books and periodicals on the walls. Below is the main collection of books, arranged systematically on the shelves to which readers have direct access.

Not far from the Radcliffe Science Library stands the next largest member of the Bodleian group, the *Library of Rhodes House*. This is the section of the Bodleian dealing with the history—social, political, and economic—of the English-speaking British Dominions and Colonies, of the United States, and of Africa. It does not contain the Bodleian books published before 1783. In the same building are housed some small lending libraries connected with the teaching departments of these subjects and comparable with the departmental libraries of the Science Museum, which we have not discussed because they concern only those working in these departments, who will have no difficulty in learning what it is necessary to know about them. The distinctive feature of the Rhodes House Library, the reason for its physical separation from the Bodleian, is that it is housed in the palatial building set up by the Rhodes trustees, along with the other activities, whether academic or merely social, connected with the same historical and geographical sphere. The professors and other teachers concerned with these subjects have their departments here under the same roof, and the active supervision of research can therefore be carried on here more directly in contact with the library than is possible in the Bodleian with its wide range of subjects and huge mass of



21. THE RADCLIFFE CAMERA

From Ingram's MEMORIALS

books. The Rhodes House Library is still in the early stages of its development, and it is impossible to say exactly what steps will be taken to make it increasingly useful as a centre of advanced study; but progress in various directions may be expected, and not least in the accumulation of materials such as facsimiles of manuscripts and even perhaps original manuscripts relating to its special fields. It may already be said to possess the necessary equipment and personnel for a research institute for Africa, the United States, and the British Commonwealth. The difficulty of drawing an exact border-line round its subjects is softened by the fact that its books may be sent for to be read in the main Bodleian building and Bodleian books may similarly be sent to Rhodes House.

The remaining libraries of the Bodleian group may be passed over more briefly. In the *Indian Institute*, which is across the road from the central Bodleian building, the centre for studies connected with British India, both for University degrees and for the training of Government servants for India, are the Bodleian books on these subjects. This library, until recently independent, was taken into the Bodleian system a few years ago, and now receives the new books on India. The important collections of Indian manuscripts and the older University collection of printed books on India remain, however, in the Bodleian, so that the Indian Institute Library and its reading-room do not form a distinct unit to the same degree as Rhodes House. Finally there are two small outposts of the Bodleian at present housed in the Examination Schools in the High Street. The first, the *Maitland Library*, was built up around a nucleus formed by the library of Professor F. W. Maitland of Cambridge with the addition of the books of Frederick Seeböhm. It was used for his seminar by Sir Paul Vinogradoff, and any one acquainted with these names will understand that, although small, it is a remarkable collection on the agrarian and legal studies for which the three men were famous. It is not at present in very active use, and its future is uncertain. The other library at the Schools is the *Law Library*. This is a working collection of books on

English law suited for the needs of undergraduates and others studying for degrees in law and not adapted for higher study. Readers in the Bodleian who, in the course of other studies, have occasion to refer to legal books will sometimes find that these have to be brought from this library. Those whose main studies are legal will doubtless consult their teachers and supervisors as to when they should use this library and when the *Codrington Library*, with which we deal below.

Such are the libraries of the Bodleian group, a group within which, roughly speaking, the books are all available in the central Bodleian building, most of them in the Camera and, if required, in the more important branches, particularly Rhodes House. They have this also in common, that none of them is a lending library. There is one other great subject or group of subjects for which the University has a large central library, but this is separately administered and has the special characteristic of being a lending library. It is the *Library of the Taylor Institution for Modern Languages*. Housed in a monumental Victorian building with a well-planned modern extension, the Taylorian is a centre for the teaching and study of foreign (other than classical or oriental) languages. Besides its main library it has departmental or seminar libraries under the control of the professors of the several subjects. The main collection is thought to be the most important separate library of modern languages in the British Isles. It comprises something considerably more than 100,000 volumes and, broadly speaking, may be said to be complementary to the Bodleian. A certain number of books much in demand at both places may be found in both libraries, but as time has gone on the tendency has rightly been towards a systematic division of spheres. A reader in the Bodleian who needs a book dealing with some modern European language or literature will therefore often have to seek it in the Taylorian, and, unfortunately, as there is no common catalogue (except that already mentioned for current periodicals) he will have to go to the Taylorian and consult the catalogue there. This is in process of revision,

and the new part is printed on the same principle as the Bodleian post-1920 catalogue. It should be noted that, as the Taylorian library had a long history of independent growth and its curators and benefactors took a wide view of its function, it contains many books not in the Bodleian which are not strictly literary or linguistic. Considerable batches of older books on the history and topography of European countries will be found there by any one who has leisure for a little exploring in the catalogue or among the shelves. There is a small collection of manuscripts, including one of Dante.

There are several other libraries which belong to the University in the strict sense of the term; but they are so closely attached to special branches of study that their purposes need little explanation, and those who are likely to need them will gravitate to them without special direction. The most important are the various collections in the *Ashmolean Museum*, which are grouped together in pleasant but unfortunately no longer sufficiently ample quarters on the ground floor of the building. The books, with some exceptions, may be borrowed and taken away: they are not merely working collections subordinate to the Museum galleries above and about them, but are open to all members of the University interested in archaeology and the fine arts. A distinct section which deserves special mention is the Haverfield Library on Roman Britain, of which the kernel is formed by the library of the late Professor Haverfield.

Next in size comes the *Library of the English School*, at present kept in an upper room of the Examination Schools. This is definitely intended for students of the English language and literature, and is maintained by the appropriate faculty: its room serves also for certain purposes of informal instruction. On the other hand, it is far from being a mere working collection of cheap modern books. Its rapidly filling shelves contain many books of special value and interest, and a number of facsimiles of manuscripts. Two personal collections embodied in it are those of the late Professors Napier and Raleigh. The whole forms a representative and self-

contained library in which access to the shelves and borrowing are allowed. A beginning has been made in another part of the same large building with the formation of a library on similar principles for the modern history school, more particularly in connexion with the work for advanced degrees, and this is already provided with the leading works on palaeography, diplomatic and the other 'auxiliary sciences'. It is hoped that it will become a centre of Oxford historical studies. The *School of Geography* has its own lending library and collection of maps. The last of these departmental libraries is the active and valuable *Grenans Library of Mathematics*, which, though a part of the library of Magdalen College, is open to all members of the University and is regularly resorted to by users of standard mathematical books and periodicals. Thus, in one way or another, the University provides, besides its main libraries, smaller libraries adequate for many ordinary needs, in which books may be obtained more quickly and used with greater freedom than the Bodleian or the Radcliffe Science Library permit.

It would be an exaggeration to say that the college libraries formed a third line in the University's library system. There is not enough co-ordination between them to justify the use of such an expression, and attempts to work them into a single organization have failed in the past and are unlikely to be renewed. At the same time there is far more informal co-operation than might be supposed, and, although in theory they are private libraries for the members of their particular colleges, in practice they do not jealously conceal their contents from the outside world. As we have explained, it is customary for their manuscripts to be sent to the Bodleian for the use of students. The catalogue of these manuscripts by H. O. Coxe is familiar in all great libraries and gives an idea of their contents, but not an absolutely full or exact idea, so that sometimes personal inquiries or the examination of a more recent or corrected catalogue in the college concerned will point to fresh materials. Altogether the colleges have more than four thousand manuscripts, many of them very im-

portant for research. This does not include the archives of the colleges, the manuscripts which have been accumulated in the course of their history as records of the life of the Colleges themselves or of their affairs as owners of property. In some of the older colleges these collections of muniments are very rich, including, for instance, much that was taken over from monastic foundations whose property passed into the hands of the colleges. Some colleges, for instance Oriel, All Souls, Magdalen, and Christ Church, have done much, with or without the co-operation of the Oxford Historical Society, to make known by means of catalogues or full printed texts the contents of their muniment rooms; but it is not usual for these to be so easily accessible to students as the literary and historical manuscripts kept in the college libraries. The simple and sufficient reason for this is that the colleges hold their muniments as evidences of title or for other practical reasons of business connected with their estates, and must therefore exercise discretion in permitting access to them. It will, however, practically always be found that a serious student desiring to use or publish college records for genuine purposes of research will, if he approach the head of the college, find that his project is welcomed and every possible help is afforded. For the use of similar materials belonging to the University, application should be made to the Keeper of the Archives, whose rooms are in the Bodleian building.

In speaking of the Gerrans Mathematical Library we have mentioned a portion of a college library which regularly serves the whole University. Senior members of the whole University in the same way find at their disposal the pleasant *Bradley Memorial Library of Philosophy* in Merton College, where F. H. Bradley spent his working life. One of the largest of the college libraries, that of All Souls, is open to any male member of the University on introduction by a Fellow of the college or by a tutor in any other college. This library is called the *Codrington* after its principal benefactor General Christopher Codrington, a distinguished member

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of the college more than two hundred years ago, whose statue adorns it. It has been for well over half a century specialized in the subjects of law and history. It is not a select library in the sense of having had all its contents chosen with a view to covering these subjects systematically, since it incorporates the old general college library and has received a number of special bequests and donations which make it unexpectedly strong in certain branches, of which military history and economics should be specially mentioned. Besides the great library of Codrington there is a convenient reading-room with legal books on open shelves, and a further reading-room for economics.

In the remaining college libraries there are a number of special collections and other treasures which, where there are no standing arrangements for their exhibition, may usually be seen by any worker who asks the permission of the college librarian. Without professing to enumerate all of these we will mention some which may be of use especially to those who come to Oxford to carry on original investigations. At Brasenose is the Pelham Collection of Ancient History, at Corpus the Shadworth Hodgson Library, which is primarily philosophical; in the magnificent library of Christ Church, with much else, are notable collections for Hebrew, Icelandic, and music. Exeter has the Edersheim Collection of Jewish and other related works. Jesus, with its special Welsh connexion, is naturally the home of a Celtic collection. New College owns the collection of books on universities made by the late Dr. Rashdall. Oriel, besides interesting works of its own members such as Prynne, Gilbert White, and Newman, has the complete library of an eighteenth-century collector, the last Lord Leigh of the first creation. Pembroke has the Birkbeck Hill Johnsoniana and the Chandler Library of philosophy, especially Aristotelean books. Queen's has the Slavonic books and periodicals of the late W. T. Morfill, and Sir Joseph Williamson's proclamations; University has early Americana; Worcester a wealth of Civil War pamphlets and old plays.

Of these old plays at Worcester there is a catalogue privately

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printed for the Provost and Fellows in 1929, and there are a few other printed catalogues which give useful information about the college libraries. Merton, for instance, printed a general catalogue in 1880, followed by several sets of *Addenda*; but the lack of published catalogues is the chief obstacle to the effective use of the college libraries by students. Most of the colleges have to be content with manuscript catalogues in card or book form, but happily there is a vigorous movement for cataloguing such of their printed books as are earlier than the year 1641. This has already led to the publication of a catalogue by Magdalen, and work is far advanced in some other colleges. The materials accumulated up to date for this work are kept at the Bodleian where they may be used on application to the staff. Independently of the general plan a catalogue of the early printed books at Wadham has been published. Their early books constitute for the student the most important aspect of the college libraries. Until recent times each was an independent general library of learning and literature, with a history going back to the foundation of the college. With the great modern increase in the output of books and the widening scope of University studies their character has necessarily altered, and their accessions now are mainly for the purpose of keeping up special collections and providing the books needed by undergraduates reading for the honour schools. There is much variation in the scale and nature of the provision of reading-space, but as that is a matter affecting only the members of each college it is needless to say anything here except that some colleges have fitted up attractive reading-rooms for as many as can possibly use them, while others prefer to encourage undergraduates to take the books away for reading in their own rooms.

The women's colleges have, in proportion to their size, perhaps the greatest amount of reading-room accommodation, and, besides having each its own library, the four of them in common share with the Home Students the *Nettleship Library*, an undergraduates' working library kept in the building where the Home Students have their head-quarters.

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The list of libraries useful to students in Oxford is still not complete. Without coming down to the quite small or highly specialized libraries, we should mention three more, two of which deal with particular studies. At Pusey House in St. Giles's is a considerable library, mainly theological, which is available for male members of the University, though the books cannot be taken away. There are some foreign theological books and periodicals which are not in the Bodleian. The newer library of Barnett House in Broad Street has to do with economics, sociology, and related subjects. It is not large, but the books, except periodicals and Government publications, may be taken away, and the library is therefore of much use to undergraduates (who are admitted if they belong to subscribing colleges) and to the private subscribers. Finally we should mention what is in its way the most useful library in Oxford, that of the Union Society. The Union is most famous as a debating society, but its large club buildings contain an admirably selected general library of over forty thousand volumes. The main library room with its now scarcely visible decorations played an important part in the history of the pre-Raphaelite movement. The library is a lending library and there is open access to the shelves. Membership of the society is open to all men members of the University, and the members are well served by their library both for pleasure and for some of the purposes of their work.

Such are the libraries of Oxford as they appear on a general survey from the point of view of those who use them day by day. In estimating the library provision which Oxford has to offer, we have to take into account not a single library but somewhere near fifty. This is not, as might appear, a startling example of administrative chaos. Though, as we have admitted, something remains to be done, and ought to be done, to enable the libraries to supplement one another's resources and services more readily and smoothly, their multiplicity is in the main not a weakness but a strength. It means that each group of workers has been able to build up in its own vicinity and in accordance with its proved requirements

a library of its own which satisfies its needs in the first instance. The larger central collections of the University are thus almost in the nature of a reserve for exceptional or more exalted purposes, and they are the more fully available for these purposes because much of the routine of the service of books is discharged in a more homely way elsewhere. The plurality of libraries in Oxford has another aspect from which, instead of requiring a word of apology or of explanation, it merits nothing but praise. It is not merely the books and manuscripts on their shelves but also the libraries themselves as living and growing organisms which are materials for the historian and the student of civilization. Nowhere in the world is it possible to obtain a better view, a better actual physical view, of the historical development of the library in medieval and modern times, of its internal economy and of its place in the organization of human life.

Before printing was invented, even before Chaucer wrote about his clerk of Oxenford, the library of Merton College was built. It still stands, the oldest library in England, and in it there is an astrolabe which may even be the one which Chaucer described for little Lewis his son. The interior has been somewhat altered, but its general form and the fittings of its western arm (it runs along two sides of a small quadrangle) remain much as they were in the late fourteenth century. The bookcases stand out at right angles from the walls, leaving a gangway down the middle, with benches between the bookcases and sloping counters of thick oak to hold the books as they are read. The lighting is from narrow lancet windows in the bays. The quiet greys and browns of the woodwork and the old bindings, the atmosphere of peace and antiquity make this seem what it is, the best-preserved specimen of a medieval library in England. Some of the books still have their chains. There are other details of medieval fittings which are better represented in other Oxford libraries. The old library at Trinity, for instance, which has associations with the first of English bibliophiles, Richard de Bury, still has its precious panels of painted glass in the

windows. At All Souls the glass from the older library may be seen in the ante-chapel. Of Duke Humphrey's Library we have already spoken, and there are still other medieval libraries in Oxford. At Balliol the old fifteenth-century library, for long little more than a book-store, has lately been brought into use again as a working-place, and, when the first impression of their primitive simplicity has passed, it will be seen that this is the distinctive purpose of the library buildings of the Middle Ages. They are comparatively small, because they belong to a time when books were few and costly; but the books were there to be read and not merely for show, and the furnishings, simple and practical for all the sober beauty of their design and craftsmanship, were meant for the convenience of the little societies of scholars who worked among the books.

This medieval type of building persisted long after the end of what we usually reckon as the Middle Ages, and in one college after another we can see how gradually they altered in size and arrangement all through the sixteenth and seventeenth centuries. Corpus is a foundation of the early Renaissance days, and Erasmus visited and praised its library when it was still new, but in its general effect it seems to belong to the same age as that of Merton, with which it may even be compared for beauty and charm. Jesus and St. John's, where Archbishop Laud made a large addition to the library building, show further developments of the same type, and to it belongs even the spacious and elegant upper library of Queen's, which was built in the reign of William III. From this library, however, the sloping desks have been taken away, and it requires a little effort to see that the high, wide room with its ornamental plaster ceiling and its great round-headed windows is the direct successor of the timber-roofed Gothic chambers. It is meant not only for work, but also for display, and, if some of its predecessors were also in their very different way meant to be impressive and grand, this was at least a new kind of display, an expression of the new ideals of the age then beginning which was to be called the age of enlightenment.

At about that time the tendencies of the new age brought

about a change in the buildings of Oxford. The last traditions of the Gothic manner, which had lingered here as a local style, gave way before an open, well-lit and classical dignity. The heads of colleges and the colleges themselves began to put up buildings like the houses of noblemen and gentlemen outside. University buildings began to be modelled on the public buildings of London or the continental capitals. The new libraries were designed at least as much for show as for study. The Codrington Library at All Souls was built as a noble room, with a high gallery and a floor of figured marble some sixty yards in length. The books were in cases flat against the wall, and the few small desks which stood about the sides hardly interfered with the openness of the great perspective. Opposite the Codrington there was built the largest and most imposing of the eighteenth-century libraries of Oxford or of England, the *Radcliffe Camera*. At first it was intended to serve as a medical library, supplementary to the Bodleian, but although it was not built merely for ostentation, to imagine it as it was at first, one must think of it without its crowd of readers and the masses of *materiel* which have been provided for them. The wide floor under the dome, now encumbered by the catalogue and other utilitarian matter, lay empty for the sightseer to select a position from which to contemplate the casts of classical statuary or Dr. John Radcliffe, floridly sculptured in his wig and gown. In its way the Radcliffe is supreme; but there are still other libraries in Oxford which show the meaning and influence of the eighteenth-century pursuit of 'distinction'. There is Christ Church library, with its ambitious pillared façade; there is Worcester, not large but typical of the period; there is Oriel built at the end of the century by Wyatt, the fashionable architect of the time, and built with the largest room that could be put on the site. Each of them makes its own contribution to what we know of the eighteenth century.

The nineteenth brought changes in all the factors which affect library-planning, and it saw the erection of a certain number of new libraries in Oxford, some of which have an

Libraries

architectural interest, though it was not until the *Radcliffe Science Library* was built by Sir Thomas Jackson, to be opened in 1901, that any large independent library building was put up. The most recent library building standing by itself is the new war memorial library of Trinity College. For a considerable time past, however, the greatest building activities of the Oxford libraries have been spent in making additions and adaptations rather than entirely new buildings. At Balliol the old college hall became a library-room; Oriel took in the old chapel of St. Mary Hall as an undergraduates' reading-room. All sorts of devices were necessary to cope with the demands in a growing university for more books and for books on more subjects. Thus many of the library buildings have here and there an air of makeshift, or at least bear traces of having been converted from another purpose, just as some of the most remarkable of the earlier library buildings have been converted to other uses, like that of All Souls which is now a lecture-room, a fifteenth-century room with elaborate Elizabethan plaster-work in the ceiling. What strikes every visitor to an Oxford library is something that can scarcely be conveyed by any description, the air of its having grown to be what it is through continual use and habitation. The indescribable accumulation of treasures and curiosities of all kinds is part of this: the Oxford libraries are very human institutions, and are as far as possible from being a mere mechanism for the supply of books. To some they may appear anxious to conceal the degree of modern efficiency which they actually attain. It is symbolic of this decorous modesty that the largest book-store of the Bodleian is hidden underground. The visitor who looks up at the dome of the Radcliffe Camera does not suspect that below the crescent-shaped turf lawn at his feet there are two tiers of steel flooring with rolling book-cases to carry, in the smallest possible space, well over half a million books.

At the time when it was made, which is now twenty years ago, this underground store represented the most advanced technique of library organization, equipment, and design.

Surprising as it may seem when we are under the impression of their picturesque and time-worn beauty, the same is true of one after another of the older buildings of which we have just mentioned only a few of the more notable. The evolution of the library has been an integral and important part of the whole development of the University, and the librarians of all ages have been amongst the great makers of Oxford. Oxford as it now is has the distinction and the advantage, though it is also in its way a burden and a responsibility, of carrying along with it in the present an enormous heritage from the past, a living inheritance of tradition embodied in a physical inheritance of buildings and books and possessions of many kinds. If we insist on the unique value of all this to the work which the University still carries on, we must not fall into the injustice of supposing that the Oxford librarians are or have been mere custodians. In every age, and in our own as in any other, the best librarianship must be in the closest touch with the best thought. To know what books or manuscripts to acquire, and by what apparatus and organization to make them to the fullest degree available for profitable use, the librarian must command the best knowledge of the world's resources of learning and of its needs and methods in education and research. In a university his work will touch at every point that of his fellow-workers who are not librarians, gaining from it and contributing to it. The last and highest claim that we make for the libraries of Oxford is that they are a great centre of library science in this largest sense. In meeting the great needs of the future the librarians of Oxford, like their predecessors from the craftsmen of Merton library to the engineers of the underground store, will bring to their task the full resources of modern skill. In the current administration of their libraries they maintain a standard which, if we compare their available means with the visible results, need fear no comparison in the world.¹

¹ The writer wishes to acknowledge his obligation to Bodley's Librarian, Dr. H. H. E. Craster, who kindly read the manuscript of this chapter.

TABLE OF LIBRARIES USEFUL FOR
DIFFERENT SUBJECTS

GENERAL.

Bodleian, Radcliffe Camera, Col-
lege Libraries, Union Society,
Nettleship (for women only),
Oxford City Library.

HISTORY:

ANCIENT.

MEDIEVAL AND MODERN.

Ashmolean.
Faculty Library, Codrington Lib-
rary, All Souls (for men only).
Rhodes House.

AMERICA, AFRICA,
BRITISH COMMONWEALTH.

ENGLISH LANGUAGE
AND LITERATURE.

Faculty Library.

MODERN LANGUAGES.

Taylorian.

LAW.

Bodleian Law Library, Maitland,
Codrington (for men only).

THEOLOGY.

Pusey House (for men only).

MEDICINE AND
NATURAL SCIENCE.

Radcliffe Science Library.

MATHEMATICS.

Radcliffe Science Library, Ger-
rans (Magdalen).

FINE ARTS AND
ARCHAEOLOGY.

Ashmolean.

BRITISH INDIA.

Indian Institute.

GEOGRAPHY.

School of Geography.

SOCIAL STUDIES.

Barnett House.

LABORATORIES AND RESEARCH IN NATURAL SCIENCE

Edited by C. N. HINSHELWOOD

§ *Historical*

THE history of science in Oxford is marked by illustrious beginnings, followed by a period of almost complete stagnation, and then by a revival, developing slowly during the second part of the nineteenth century, and accelerating rapidly during the last ten or twenty years. At the present time many of the laboratories of Oxford are of the most modern design, while others are only awaiting the endowment and occasion for the expansion which their work and activity render more and more urgent.

The first great name in Oxford science is that of Roger Bacon, 1214-92, who did much to establish the scientific method, and worked on chemistry, medicine, astronomy, and mathematics, discovering, among other things, the properties of lenses. Much of his work was lost, but such as survived was studied in Oxford during the Middle Ages and exerted great influence. During the Middle Ages mathematics, with its practical application to astronomy, surveying, and the construction of almanacs and sundials, played a large part in Oxford teaching. It flourished especially in the fourteenth century, among its most notable exponents being Thomas Bradwardine, c. 1325.

Robert Recorde (All Souls College, 1531) published the first English Algebra and first made use of signs of multiplication and of equality. Leonard Digges (University College, c. 1550) worked on methods of surveying and such problems as almanac calculation. From his works, published posthumously, it appears that he even anticipated Galileo in the construction of telescopes.

Medicine was an important study in Oxford during the Middle Ages though perhaps the methods by which it was prosecuted can hardly be described as scientific. Thomas

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Linacre (All Souls College, 1460–1544) introduced new ideas on the treatment of diseases. William Harvey, the discoverer of the circulation of the blood, came to Oxford in 1642, and between then and 1646 carried out experimental researches assisted by George Bathurst and Francis Potter of Trinity College. Among the earlier Oxford astronomers the names of Halley and Bradley (the discoverer of aberration) stand out: to them should be added the name, more famous in other connexions, of Sir Christopher Wren.

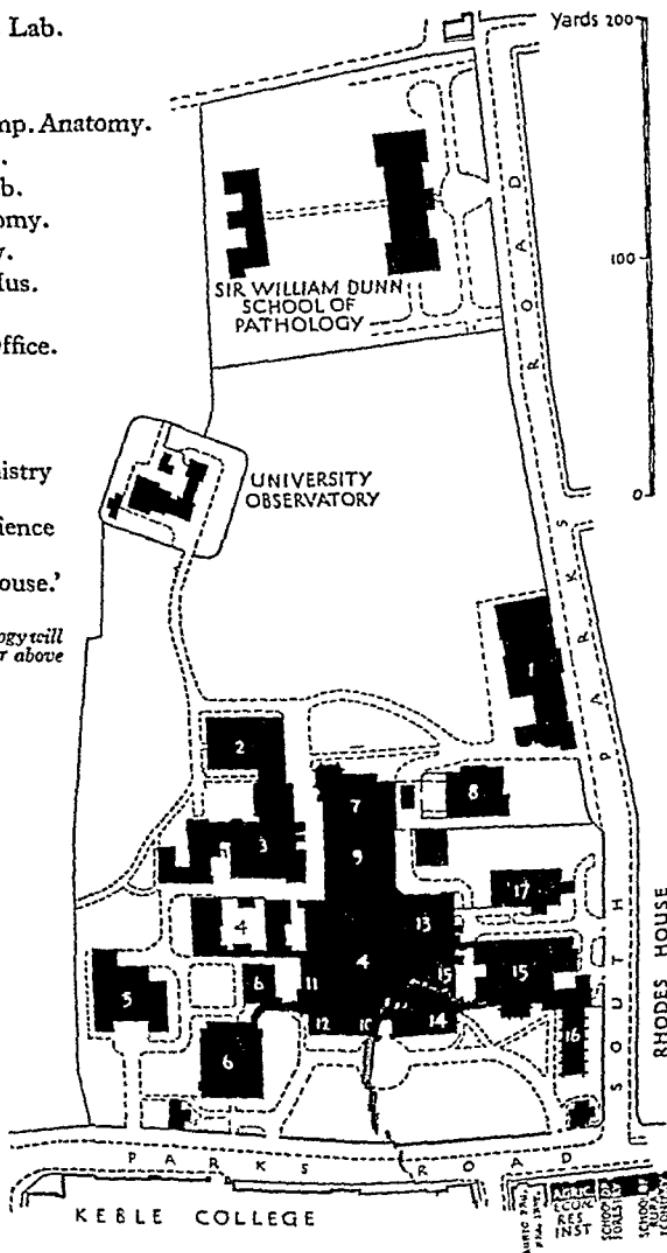
During the Civil War a considerable migration of men of science to Oxford took place. Meetings were held regularly at the lodgings of Dr. Wilkins, Warden of Wadham, and later in the house of the Hon. Robert Boyle, who resided in Oxford from 1654 till 1668. During this time, assisted by Robert Hooke, he worked on the spring of the air, whence arose Boyle's law. Among the other scientists who used to meet in Oxford at this time were Dr. Willis, Wren, Dr. Petty, Seth Ward, and Ralph Bathurst. Boyle brought to Oxford one Peter Sthael, who gave lectures in chemistry which many senior members of the University were wont to attend. Between 1668 and 1675 John Mayow showed that during the process of respiration one constituent only of the atmosphere was used up, and also showed that during calcination in air metals gained in weight. In this he anticipated Lavoisier by more than a century.

In 1683 science in Oxford was much stimulated by the activities of Dr. Robert Plot, who persuaded Elias Ashmole to present to the University a valuable collection of natural rarities, most of which had been collected by the Trades-cants. The Ashmolean Museum was erected to house them in 1683, and in the basement a chemical laboratory was established.

During the whole of the eighteenth century the active prosecution of science in Oxford ceased. In the early part of the nineteenth century various professorships and readerships were re-established, and various small laboratories set up. In 1850 the Honour Schools of Natural Science were

1. Dyson Perrins Lab.
2. Biochemistry.
3. Physiology.
4. Zoology & Comp. Anatomy.
5. Electrical Lab.
6. Clarendon Lab.
7. Human Anatomy.
8. Pharmacology.
9. Pitt-Rivers Mus.
10. Porter.
11. Secretary's Office.
12. Medicine.
13. Geology.
14. Mineralogy.¹
15. Old Chemistry Dept.¹
16. Radcliffe Science Lib.
17. 'Museum House.'

¹ Hope Dept. of Zoology will be found on 1st floor above Nos. 14 and 15.



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founded, and between the years 1855 and 1860 the University Museum was erected. This formed the nucleus of many of the University scientific departments, which in their present form occupy sites adjacent to the Museum, in and adjoining the University Parks.

The foundation of the Museum marked the beginning of the modern period, though it is only in comparatively recent years that the full rate of progress has been attained. The dates of foundation of the various modern departments are usually indicated in the more detailed account of them which follows.

§ Physics

Up till 1900 the only University physics laboratory was the Clarendon Laboratory, which had been built in 1872, and is one of the oldest physical laboratories in England. In 1900 the Wykeham Professorship of Physics was established, and the first accommodation for the new department was provided in the Museum building. In 1910 the present Electrical Laboratory was built by the Drapers' Company. In this new laboratory, just before the War, H. G. J. Moseley carried out his well-known experiments on the X-ray spectra of the elements.

In the *Clarendon Laboratory* there are usually about fifty students working for the Final Honour School of Physics, practical work being carried out mainly on the properties of matter, heat, and light. Space is available for twelve to fifteen research students, and the laboratory is well equipped for work in most branches of physics. Recent work has included researches in cosmic physics, radio-activity, electrical conduction, spectroscopy, X-rays, and the properties of matter at high and low temperatures.

The main work of the *Electrical Laboratory*, in addition to research, is instruction in electricity for undergraduates reading for the Honour School of Physics. There are also classes for Engineering students in general physics. Instruction is also given for the preliminary examination in mechanics

Laboratories and Research in Natural Science

and physics. There is room for roughly forty to fifty Honours students, twenty to thirty Engineering students, and about a hundred students working for the preliminary examination.

The main research work of the department has been on the conduction of electricity through gases. Up to 1914 the chief experimental investigations related to ionization by collision, diffusion of electrons, and sparking potentials. Of late years the work on diffusion has been extended and many investigations of high-frequency alternating current discharges have been made. Also various problems relating to high-frequency oscillations have been studied, including problems connected with the dielectric constants of liquids.

§ Engineering

The Chair of Engineering Science was founded in 1907. The present laboratory was opened in 1914 and a new wing was completed in 1927. A further extension was finished in May 1932.

The prescribed course of study at the Engineering Laboratory is designed to occupy two years and is intended to be followed by an apprenticeship with some engineering firm. The course for the Final Examination of the Honour School is intended to include all subjects which constitute the essential scientific equipment of an engineer, no attempt being made to teach technical handicraft at the Laboratory. The instruction given includes the measurement of physical quantities which underlie the theory of mechanical and electrical engineering, and the testing of materials and complete machines. In the Drawing Office time is spent mainly on graphical methods for solving engineering problems, and on geometrical projection; the elements of machine drawing are also taught, and students are given some practice in the reading of working drawings.

Research is carried out in the department under the direction of the Professor and staff. Facilities are afforded to advanced students and to graduates (or in special cases to

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an undergraduate who has passed the Final Examination at the end of his second year) for undertaking research work.

§ Chemistry

For the purposes of teaching in the University chemistry is divided into the three branches—Inorganic Chemistry, Organic Chemistry, and Physical Chemistry. Inorganic chemistry is taught at the *Old Chemistry Department*, organic chemistry at the *Dyson Perrins Laboratory*, and physical chemistry by the college laboratories of *Balliol and Trinity Colleges*, and of *Jesus College*. These college laboratories conduct courses by arrangement with the University to which all chemistry students are admitted. The *Christ Church Laboratory* conducts on the same principle a course in chemistry for students in engineering.

Research work in chemistry is carried out in all these laboratories. The policy of continuing college laboratories was the subject of discussion some years ago. It will be observed from what is stated above that at present all the existing college laboratories play a part in a definitely organized scheme of University teaching, while remaining centres of independent scientific research.

§ The Old Chemistry Department

The Old Chemistry Department dates from 1860 when the University Museum was built. It then consisted practically of a single room, with a few small offices, for the laboratory work in all branches of chemistry. This room is a replica of the Monks' Kitchen at Glastonbury Abbey—an open octagonal structure, 33 feet across the sides, and over 45 feet high to the apex of eight curved wooden beams, which meet in the centre of the roof below an external lantern. The present main building was added in 1878. It is on two floors, the upper, which is the main teaching laboratory, being a single room 120 feet by 24 feet, and the lower comprising

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six rooms. In 1901, to gain access to the new Radcliffe Library from the Museum Court, the Glastonbury Kitchen was divided into two by the insertion of a new floor on the same level as the upper floor of the main building, and between the two buildings other small rooms on this level were also added. The lower floor of the Kitchen became in time an annexe of the Library.

In 1920 a small workshop was built and soon extended. In 1928 a further extension was made, on the ground level, between the Glastonbury Kitchen and the Library, and an upper floor research laboratory built above it, with places for several research workers. In 1929 the whole of the rest of the department was fundamentally reconstructed, the interior furnishings being entirely renewed, and the whole of the rooms on the upper floor being put *en suite*.

The department now has about eighty working places on the upper floor for undergraduate students doing analytical work, and seven or eight rooms of various sizes for graduate and research work in various branches of the subject. These at present comprise the sorption and reaction of gases, spectroscopy, radiochemistry, and metallography. The Old Chemistry Department furnishes an interesting example of how an old and apparently out-of-date type of building can be successfully adapted to the needs of a modern laboratory.

§ The Dyson Perrins Laboratory

This laboratory was opened in 1916, the funds for its construction having been given by Mr. Dyson Perrins. In 1921 it was very considerably enlarged by the University. It is a large modern laboratory, with accommodation for about sixty Honours students, forty students in medical organic chemistry, and for about fifty research students. Under the late Professor W. H. Perkin the new department rapidly became an important centre of chemical research.

Practical courses are conducted in organic chemistry for

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the Final Examination (Part I) of the Honour School of Chemistry, and in organic chemistry for the First B.M. examination.

The research work of the department is principally in the field of organic chemistry, particularly in connexion with the structure and synthesis of natural products, and with the application of physical methods to the elucidation of problems of organic chemistry.

§ The Balliol College and Trinity College Laboratory

A laboratory for the teaching of chemistry was first opened in Balliol College in 1853. From 1855 to 1857 Dr. Brodie, the University Professor of Chemistry, was allowed to use this laboratory until the chemical department in the Museum, then being built, was ready. Besides the main laboratory, partly in Balliol and partly in Trinity College, there are five other rooms, including a modern research room added by Trinity in 1929.

In conjunction with the laboratory of Jesus College, the Balliol and Trinity Laboratory conducts by arrangement with the University the general course in practical physical chemistry. It also provides normally for from ten to twenty research workers.

The problems to which attention has been directed of late years are those of physical chemistry, especially those connected with electrochemistry of solutions, calorimetry, photochemistry, and the kinetics of chemical reactions.

§ The Jesus College Laboratory

The Jesus College Laboratory was erected in 1906, and opened in 1907. It includes two rooms for the practical instruction of about thirty students in general and physical chemistry, two rooms of sufficient size for ten research students, two dark rooms for research work in photochemistry, a library, a lecture theatre, a mechanics room, store room, balance room, &c.

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The research work conducted by the staff and advanced students in the Jesus College Laboratory has been chiefly on the problems of physical and inorganic chemistry, especially in connexion with photochemistry.

§ Christ Church Laboratory

The Christ Church Laboratory was erected in 1766, with money left by Dr. Matthew Lee, physician to Frederick Prince of Wales. It was used primarily as an anatomy laboratory and partly as a chemistry laboratory. When the University Museum was founded, the Dr. Lee's Reader in Anatomy migrated there with his collections, leaving the building primarily as a chemistry laboratory. In 1903 the building was extended. In 1930 in connexion with the beautifying of the south front of the college the ugly top story was removed and a lecture room was converted into an up-to-date laboratory for inorganic work. Under the Lee's Readers in Chemistry, A. Vernon-Harcourt and H. B. Baker, the laboratory was an active centre of research in inorganic chemistry for many years. At the present time investigations in radio-activity, on intermetallic compounds, and on inorganic analytical problems are being carried on. The laboratory has room for eighteen students.

§ The Biochemical Laboratory

The recognition of biochemistry as an independent subject of study and research in the University is a development of the last few years only. In 1920 the Whitley Chair of Biochemistry was founded by the generosity of Mr. Whitley of Trinity College, and in 1924 the erection of the Biochemical Laboratory was begun. The construction of this laboratory was rendered possible by a munificent gift from the Rockefeller Foundation.

The laboratory adjoins the Department of Physiology, with which it works in close co-operation, especially in connexion with the teaching of students in the School of Medicine.

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The two departments have in common a large lecture room to seat some two hundred students, and also a conjoint library.

The internal construction of the laboratory has been carefully designed to permit of great elasticity in the size of classes, so that if necessary one hundred students at a time can be dealt with. The instructional work comprises classes in physiological chemistry for medical students, in biochemistry for the Honour School of Physiology, in pure biochemistry for students in the Honour School of Chemistry (who may offer biochemistry as a special subject), and in comparative biochemistry for students of zoology.

The laboratory can take about twenty research workers, and is equipped with all modern facilities, including refrigeration, proper quarters for keeping animals, and so on. The research work has been concerned largely with problems of nutrition and the chemistry of the vitamins, with the biochemistry of micro-organisms, and with the physical chemistry of surfaces in relation to the living cell.

DEPARTMENTS

§ Department of Mineralogy and Crystallography

This department occupies the four ground-floor rooms to the south of the main entrance, and two large rooms on the first floor at the north end of the Museum, as well as part of the south section of the Central Court. It was established in 1897 and extended in 1910. The department contains collections of minerals and of specimens and models illustrating the mode of growth, symmetry, geometrical and physical characters, and intimate structure of crystals. (For a description of the collections see the section 'Museums').

Students are instructed in mineralogy and crystallography, one of the upper rooms being fitted for this purpose with a fully labelled collection and with goniometers and microscopes. There is a dark room for optical work.

The research laboratories are well equipped with instruments and apparatus for the study of crystals, including apparatus for the examination of crystals by X-rays.

§ Department of Geology

The Chair of Geology was founded in 1818. At that time the subject was without a home. On the completion of the present University Museum in 1860 collections of specimens were transferred from the Ashmolean Museum and formed the nucleus of the present collection, which has become one of the most important in the country. In 1891 a two-storied building was added as an annexe to the Museum, and in 1907 an additional story was added.

The collections in the Museum are described in another place. In the laboratory practical instruction is given to students in the Honour School of Geology, and to students in the schools of Geography, Forestry, and Agriculture.

The department is completely equipped for the prosecution of original research, and possesses machinery for the investigation of fossils by means of serial sections and

special devices for the investigation of rocks by mechanical analysis.

The original work accomplished during the last thirty years has included the study of the physical constants of rock-forming minerals; the nature and minute structure of numerous species of igneous rocks; the determination of 'zones', based on palaeontological evidence, in mesozoic strata; the description of species of fossil organisms; the study of palaeolithic deposits; the geology of unexplored regions in Peru and Spitzbergen; the flow of glaciers; and the evidence of glaciation in the Thames valley.

§ Department of Botany

The Department of Botany is situated at the bottom of High Street, immediately opposite Magdalen College. It occupies two buildings on either side of the Entrance Gateway (1632) to the Botanic Garden. That on the left of the gateway, at one time the Professor's house, is now occupied by the library and herbarium. That on the right contains the laboratories and lecture rooms.

The Botanic Garden covers five acres at the back of the buildings, to the south. It was enclosed in 1621 and is the oldest 'Physic Garden' in England, intended, like the similar garden at Chelsea, mainly for the growing and study of herbs useful in medicine, though all sorts of other plants were cultivated from the first. The older Botanic Gardens throughout Europe had a similar origin. The garden is still enclosed by the original wall (finished in 1633), except along part of the north side, where the buildings were erected at a much later date. A range of modern plant houses was built in 1894 to the east of the eastern wall of the garden, between it and the Cherwell.

The first gardener, Jacob Bobart, was appointed in 1632, and the first Professor, Dr. Robert Morison, in 1669. In 1728 Dr. Sherard left a benefaction for the Professorship, and since that date the title of 'Sherardian Professor' has been held by the occupant of the Chair of Botany.

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The laboratories and lecture rooms, some of which were originally converted plant houses, have been altered and extended from time to time during the last forty years, and now provide for about seventy elementary and twenty Honours students (the present numbers), and a limited space for research.

The curriculum endeavours to cover most of the topics included in modern botany: plant morphology, plant physiology, ecology, cytology, genetics, and mycology. The curriculum of Honours work has recently been reorganized, and much attention is now paid to physiology, ecology, and mycology.

The training of men for agricultural and forestry work overseas is an increasingly important part of the work of the department, and this training is now as far as possible based on practical physiology in the laboratory as well as field work on the vegetation accessible from Oxford. It is intended to develop research in this direction. The branches of research at present occupying the attention of the department are purely physiological: the role of potassium in metabolism and allied problems, and the transmission and inhibition of stimuli to growth.

§ Department of Zoology

The Department of Zoology and Comparative Anatomy occupies the north side of the central Museum building, and extends into two additional more modern buildings containing the chief laboratories and research rooms. The department has two lecture rooms, a small library, and a dark room for photography. There are also a constant temperature room and, in the garden, a heated greenhouse with aquaria and an animal-breeding house, all of which may be used for experimental purposes and for the study of Genetics.

The teaching staff consists of the Linacre Professor and several University and Departmental Demonstrators.

The courses of lectures and practical work cover the

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whole field of zoology, including general zoology (elementary and advanced), animal morphology, embryology, cytology, experimental zoology and embryology, genetics and ecology. The laboratories, which are open to undergraduates from 9 a.m. to 7 p.m., are fully equipped for these studies and well provided with specimens and preparations.

The Collections exhibited in the Court of the Museum are arranged and labelled so as to illustrate the more important features in the structure of the various groups of the animal kingdom. They contain many rare and valuable specimens, and both recent and extinct forms are represented. There are also special collections of Molluscan shells, Bird-skins, &c., and the departmental stores contain large numbers of specimens of all groups of the animal kingdom available for purposes of research by qualified students.

§ Department of Physiology

The laboratory was founded in 1884, and enlarged in 1908. In 1927 the space available for work in pure physiology was increased by the transference of the classes in physiological chemistry to the new biochemical laboratory.

There is accommodation for the teaching of fifty medical students for the first B.M. examination and for fifty students in the Final Honour School of Physiology. Practical classes are held in human and mammalian physiology, respiration and metabolism, histology, and junior and senior courses held in general experimental physiology. In the practical classes every opportunity is given to the student for gaining knowledge from his own practical experience rather than from set demonstrations by the teacher.

A number of rooms are equipped for the experimental investigation of the activities of the central nervous system and of neuro-muscular co-ordination by combined electrical and mechanical analysis. There is an aseptic operating room and sick bay for animals.

Facilities for all kinds of histological research are available,

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and problems concerning respiration and general metabolism in the human subject can be undertaken.

§ Department of Anatomy

The first building devoted to the teaching of human anatomy was a brick shed erected in 1885 by private subscription. Not long after, it was found necessary to erect an iron building to cope with a rapidly increasing class until 1892, when the students numbered forty-eight. Meanwhile, the University, having recognized the increasing demands of the Medical School, had approved the plans submitted by the Professor, and provided the means for the erection of the existing Department of Human Anatomy, which was completed in 1893.

In 1917 a third story was added to the present building, through the generosity of the Worshipful Company of Cloth-workers, in order to provide a dissecting room and other necessities.

In 1925 a much needed extension was added to provide for the housing of the Craniological Collection, together with class rooms for the instruction of the students taking the Diploma in Anthropology.

The department provides for the instruction necessary for medical students, whilst much material is available for study and research, especially in human embryology. During the Hilary Term classes are also held for the instruction of students taking the Diploma course in Ophthalmology. For students interested in anthropology, ample facilities are provided for the study of Man considered either from the point of view of his origin and his prehistoric associations, or ethnologically in regard to his distribution and racial affinities. The valuable collection of skulls, numbering over 2,000, widely representative of different types of mankind, all catalogued and measured in detail, provides abundant opportunity for the student interested in ethnology and the many problems involved in the study of man's reaction to his environment.

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The department is especially well equipped with means of photographic reproduction, and assistance is afforded to those working there, in the production of photomicrographs, lantern slides, and book illustrations.

§ Department of Pharmacology

In 1912 the University established a Readership in Pharmacology and provided a small laboratory for teaching and research in the subject. The laboratory was situated in the main building of the Museum. Here the room available for research workers was very limited, and the facilities were poor. A course of Experimental Pharmacology for medical students was begun and, partly owing to the relatively small number of students, the course was of a more ambitious character than that attempted in other medical schools of the country.

When the new Institute of Pathology was opened, the old Pathological Laboratory was adapted and equipped for the needs of pharmacology, the necessary reconstruction being completed in 1928.

The present laboratory has well-equipped class rooms for students and provides facilities for research for the Professor, three demonstrators, and six other workers.

The investigations at present being carried on and likely to be continued are connected especially with the pharmacological actions of new synthetic compounds and the relations between these actions and chemical structure. The subject offers a wide and as yet only partially explored field. The material for these investigations is obtained in close collaboration with the neighbouring Department of Organic Chemistry.

§ Department of Pathology

The history of modern pathology in the University began in 1890, but it was not until 1899 that a separate Pathological Department was built. The establishment of a laboratory was due to the generosity of Mr. Ewan Frazer and others. In 1907 a Chair of Pathology was established with the assistance

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of the Rhodes Trustees and of other benefactors. Since that time the work of the department has progressed steadily. The need for further building had become urgent when in 1922 the Trustees of the late Sir William Dunn most generously offered to the University the sum of £100,000 to build, equip, and endow the Sir William Dunn School of Pathology. The University provided an ideal site in the University Parks. The building was completed and opened in 1927.

The Institute consists of two buildings, a three-story main laboratory, and a two-story animal house about 60 yards behind it, the two buildings being connected by a corridor. The main laboratory is rectangular in form, approximately 180 feet by 64 feet, with the central part of each long side recessed 3 feet 9 inches, thus forming two wings 37 feet by 64 feet. The west wing is designed for teaching purposes, while the central part and east wing are devoted entirely to research.

Courses for medical students are given in bacteriology, general pathology, and morbid histology. Post-mortem demonstrations are given at the Radcliffe Infirmary, to which the Professor of Pathology is Honorary Consulting Pathologist.

During the long vacation a course in bacteriology is usually given provided there are a sufficient number of applicants.

There is room for about twenty research workers in the department. The principal researches being carried on at the present time are connected with the biological effects of light; work on experimental tuberculosis; work on various serological and immunological problems.

Space and equipment are, however, available for research on most branches of experimental pathology or bacteriology.

§ Department of Forestry

The Department of Forestry comprises two separate institutions (1) the School of Forestry, and (2) the Imperial Forestry Institute. The former is one of the regular departments of the University and provides a complete general

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training in forestry in all its branches leading to the B.A. degree. The latter provides specialized and advanced training for graduates or for forest officers deputed for 'refresher' courses; it also carries out research into forest problems, and is the main centre for the co-ordination of forest research in the Empire. Both institutions are under the charge of the Professor of Forestry, while the Imperial Forestry Institute has a separate Director acting under the general supervision of the Professor.

The *School of Forestry* was founded in 1905 when the forestry branch of the Royal Indian Engineering College at Coopers Hill was transferred to Oxford. The School building in Parks Road was erected in 1907-8 by St. John's College and extended in 1914 with the aid of subscriptions. The *Imperial Forestry Institute* was founded in 1924 as a result of resolutions of the British Empire Forestry Conference held in 1920 and 1923 and by the Imperial Economic Conference held in London in 1923. It is financed by the Forestry Commission, the Colonies, and other parts of the Empire. It is a University Institution, and is controlled by a Committee for Forestry acting on the advice of an Institute Committee on which the contributing Government Departments are represented.

The department is at present located in three separate buildings within a few minutes walk of each other; the main building of the School of Forestry is in Parks Road, opposite the University Museum, other science departments, and the Radcliffe Science Library, and contains two lecture rooms, one large and two small laboratories, a workshop, store-rooms, photographic room, library, museum, office, and several working rooms for the Staff. Buildings at the disposal of the Imperial Forestry Institute comprise the Herbarium and laboratories for the study of Systematic Forest Botany, and two houses adapted for the use of the entomological, wood structure, and engineering branches.

The *School of Forestry* provides instruction in the course of study for the B.A. degree in Forestry. This is a Pass

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Degree and the examiners specify in the list of candidates who have passed the examination those candidates who have been adjudged by them worthy of distinction in the examinations. The course of study normally extends over three years and includes practical work in this country and on the Continent. A Diploma is also granted for specialized post-graduation work on some subject bearing on forestry.

The Imperial Forestry Institute also provides courses of advanced study, its educational work comprising (1) post-graduate training of probationers for the forest services and other qualified persons, (2) training of research officers in special subjects, and (3) provision of courses for selected officers already serving. Students of the Institute may, at their own discretion and if possessed of the necessary qualifications, be matriculated as members of the University and are eligible for the Diploma in Forestry.

Bagley Wood, some 600 acres in extent and two miles southwest of the University, is the property of, and is maintained by, St. John's College, and arrangements have long been in existence whereby use is made of the wood as a demonstration area; sample plots of the more common species of trees were laid out in 1907, and experimental plantations, showing methods of treatment, nurseries, &c., are in existence; there is an arboretum containing many of the common hardwoods and conifers within the wood. A large experimental nursery, maintained by Government funds, adjoins the wood.

The Imperial Forestry Institute carries out research work mainly in those branches of forestry which deal with production, as opposed to utilization, that is, silviculture, forest management, diseases of trees, entomology, and economics. A special feature of its work is that dealing with the structural examination of wood and the identification of trees. A complete reference system of past and current literature is maintained and a considerable volume of advisory work is carried out.

The Department issues three regular sets of publications: the 'Oxford Forestry Memoirs', the 'Oxford Manuals of

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Forestry', and the 'Forest Trees and Timbers of the British Empire'.

§ School of Rural Economy

The University of Oxford has made provision for agricultural education and research by the establishment of three departments, the School of Rural Economy, the Institute for Research in Agricultural Economics, and the Institute for Research in Agricultural Engineering, which offer facilities for undergraduate and post-graduate students.

The Committee for Rural Economy supervises the Institutes and the administration of any funds provided from University or other sources for agricultural education and research. It also co-ordinates, under the direction of the Sibthorpiian Professor of Rural Economy, the work of the three departments, and has power to grant Diplomas in Rural Economy to Candidates who have satisfied the necessary conditions.

The School of Rural Economy (*Schola Economiae Rusticæ*) represents the development, in accordance with modern academic requirements, of the Professorship of Rural Economy founded and endowed by Professor Sibthorp in 1796. Its purpose is to meet the educational requirements of undergraduate and post-graduate students who, as owners, agents, farmers, administrators, scientific advisers, or agricultural research workers, will subsequently be in close contact with the management of land at home or abroad. The curriculum leads to a degree in Agriculture: it differs from curricula in other places in that it provides facilities for the study of agriculture on its economic side and includes more work of a less specifically technical nature, thus meeting a definite need in agricultural education. Instruction in practical agriculture is given on College farms, one being mechanized, and other selected farms, while Bagley Wood, 600 acres in extent and near the City, is utilized for estate forestry instruction. Special arrangements are made to meet

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the needs of graduates desiring a short course in Estate Management, and of special students.

The Diploma in Rural Economy is awarded on the results of examination. It makes provision for advanced instruction to students, whether members of the University or not, in certain branches of the subject, and aims at the development of post-graduate education in subjects for which special provision is not made at other Centres, and in the development of which this University has specialized by the encouragement of the Institutes for Research in Agricultural Economics and in Agricultural Engineering.

§ Institute for Research in Agricultural Economics

This Institute was established by the University in 1913, with the assistance of a grant from the Ministry of Agriculture and Fisheries and a temporary grant from Balliol College. The grant from the Ministry has been increased from time to time, and supplementary grants for special purposes have been made by the Development Commission and the Empire Marketing Board. There have been two small donations from private persons.

Responsibility for the administration of the Institute is vested in the Committee for Rural Economy which appoints a Sub-Committee for Agricultural Economics to assist the Director. The Institute is housed in a building in Parks Road between the School of Forestry and the Institute for Research in Agricultural Engineering, which was provided by the University and extended with a grant from the Development Commission.

The principal part of the work consists of research in the organization of farm management; the organization of agricultural marketing; the study of prices and supplies; and the study of agricultural policy. Results are published in articles in the public press and in books, pamphlets, and bulletins issued from the Institute, while summaries of work of interest to farmers are published in a quarterly bulletin entitled *The Farm Economist*. The Institute issues also an annual, *The*

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Agricultural Register, in which are summarized the events of the previous year whether in the form of legislation or of organization by the industry, together with a record of prices and supplies and of other matters appropriate to a book of reference.

Some educational and advisory work is undertaken by the Staff of the Institute. Supervision of students for Research degrees, and assistance to post-graduate students of other Universities at home and abroad are amongst the normal activities of the Staff. The Institute is engaged also in advisory work so far as its assistance is sought by landowners, farmers, and others.

The Library contains a representative collection of books and papers on the economics and history of agriculture, agricultural statistics, and official publications. It is open for consultation by members of the University and the general public.

An annual report is issued, and can be obtained by application to the Secretary.

§ Institute for Research in Agricultural Engineering

The Institute was opened in temporary premises in April 1924. In 1934 the University placed at its disposal more suitable accommodation in Parks Road adjoining the other agricultural departments. An amendment to the Statutes of the University of Oxford, passed in May 1927, defining more completely the functions and powers of the Committee for Rural Economy, entrusted to that Committee the supervision of the work of the Institute. This work is, in the main, to investigate into the application of scientific principles to agricultural machinery and engineering, and to advise upon their value.

In addition to the laboratories, library, workshops, and administrative offices in Oxford, the Institute has a Field Station of some twelve acres at Benson, where experiments are conducted upon tractors and other machinery, and machines and methods examined as far as possible in actual

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work. For this a special opportunity is afforded by the tests of implements entrusted to the Institute by the Machinery Testing Committee of the Ministry of Agriculture. Further opportunity of studying new developments is provided by the arrangement under which machines entered for the Silver Medal at the annual shows of the Royal Agricultural Society are subjected to a preliminary inspection or test by the Institute Staff.

Brochures are issued from time to time giving the results of the Institute's research into particular departments of agricultural engineering, and the literature of the subject is kept under review, a summary of information being issued periodically.

Lectures and demonstrations are given by members of the Staff in connexion with the School of Rural Economy, as well as under the Ministry of Agriculture's Scheme of Extension Lectures on Agricultural Subjects.

Facilities are available for post-graduate research.

§ Astronomy.

Built in 1875 for the study of 'astronomical physics', the University Observatory under its first two directors, Pritchard and Turner, became a recognized centre for research on the rather specialized subject of photographically determined stellar positions. As a result of substantial grants from the University, the early and now obsolescent equipment of the Observatory has been replaced by a large modern solar telescope and spectroscope, and with this equipment it is anticipated that the Observatory will be able to play a substantial part in the wider and original field of astronomical physics. Investigations are already in progress, or have just been completed, on the surface brightness of the sun, on its granulation, on its infra-red spectrum, and on various problems in stellar and nebular physics.

While courses are available for undergraduates, it is generally recognized that astronomy is a research subject for which the most suitable preparation is to be found in work for the Final Honour School of Physics. Given such a thorough foundation in physics, the astronomical knowledge necessary for research in astronomical physics can be readily and quickly acquired. Space is available at the Observatory for from four to six research students, and with the new equipment a wide field of research in astrophysics, and particularly solar physics, is open.

I. ARCHAEOLOGY AND ART

By J. L. MYRES

WITH characteristic foresight, but quite in accord with the spirit of his times, Bodley included in his Library a spacious gallery, and among his gifts objects of antiquity other than books. In 1654 the famous antiquary, John Selden, left to the University his 'ancient marbles'; in 1667 Lord Henry Howard gave the Arundel collection of inscriptions, including the celebrated 'Parian Chronicle'; others were added by Sir George Wheler in 1683; and long afterwards in 1755 the Arundel statues were reunited to the inscriptions by Henrietta Countess of Pomfret. These collections were at first preserved near or within the Bodleian building.

In 1677, when the collections of 'rarities' (principally objects of natural history) which had been formed in South Lambeth by the Tradescants, father and son, were presented by Elias Ashmole to the University, it was natural that the 'Ashmolean Museum' should be placed in close proximity to the Selden End of the Bodleian. This building, opened on 21 May 1683, is the oldest museum in Britain, and one of the oldest in Europe. It included besides objects of natural history, antiquity, and ethnography, a chemical laboratory and lecture-room, and its library contained the manuscript collections of Anthony Wood, John Aubrey, and Ashmole himself, with his books. The first Keeper, Robert Plot, was both naturalist and antiquary, as well as chemist, and the Ashmolean, especially after its reorganization by the brothers Duncan, who became keepers in 1824 and 1829, was the centre of the scientific teaching of such men as Kidd, Daubeny, and Buckland, until the foundation of the New University Museum in 1855. Then the natural history collections were transferred thither, the books, manuscripts, and coins to the Bodleian in 1858, and

other parts of the collection to the Clarendon Building, when this was vacated by the University Press.

Meanwhile, benefactions from the Rev. Dr. Francis Randolph (1796) and Sir Roger Newdigate (1776–1805), for better display of the Arundel and Pomfret marbles, enabled the University to combine with the Taylor Institution which was being planned in 1839–45 for study and teaching of Modern Languages, a 'Randolph Gallery', and to house also in 1842 Lady Chantrey's gift of the plaster models of Sir Francis Chantrey's sculptures, together with the University's collection of portraits of various dates. And to these 'University Galleries' came in succession the Woodburn-Lawrence collection of Michelangelo and Raphael drawings, presented by a body of subscribers in 1846, the Chambers Hall gift of bronzes, pictures, prints, and drawings (1855), the Ruskin Drawing School with its drawings and water colours (1861), the Douce Collection of engravings (1863), the Castellani Collection of classical antiquities (purchased in 1875), and the casts of sculpture, the library, and other departmental equipment provided since 1884 for the Lincoln and Merton Professor of Art and Archaeology.

The building in which these various collections, together with the Taylor Institution, were installed, was erected on a site acquired from Worcester College, from the design of Charles Robert Cockerell, R.A., and is a notable experiment in that 'Neo-Greek' style which was competing in vain with the 'Gothic Revival'. It owes much to the architect's study of the temple of Apollo Epikourios at Bassae, of which he was the first to seize the significance. Additional galleries and lecture-rooms, without architectural pretensions, have been erected in rear through the liberality of Charles Drury Edward Fortnum (1892–5); various internal changes were made in 1900, 1908, and 1923–8; and a new North Wing for the Taylor Institution has now been added (1932). Following the acquisition by the Ashmolean Museum of the Douglas collection from Sir Richard Colt Hoare, in 1829, and other Anglo-Saxon antiquities in 1858 and 1865, began

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a long series of contributions, principally of Egyptian antiquities from the Rev. Greville John Chester, who, from 1865 to his death in 1892, had insisted on the importance of the University's archaeological and artistic collections, their close connexion with its historical and literary studies, and the anomalies in their arrangement. From the appointment of Mr. (now Sir) Arthur Evans as Keeper in 1884, and the benefactions of Charles Drury Edward Fortnum between 1887-99, progress was rapid. In 1894 the Ashmolean antiquities were transferred to a new building in rear of the Randolph Gallery, and the Arundel and Pomfret marbles more effectively displayed. From the Keeper's journeys and excavations in Crete, from Sir Flinders Petrie's work in Egypt, and from the Oldfield Collection, came valuable antiquities of various periods; from Mrs. Martha Combe, her English pre-Raphaelite pictures (1893); and from Thomas Humphrey Ward, John D. Chambers (1897), Mr. James Reddie Anderson (1913), and Mrs. Weldon, other valuable paintings. From the Bodleian have been transferred the entire Coin Collection (1921), the Hope Collection of Engraved Portraits and the Douce Engravings (1924).

In 1908 the separate administrations of the Ashmolean Museum and the University Galleries were merged in the Board of Visitors of the Ashmolean Museum of Art and Archaeology, with the Keeper of the Ashmolean Museum as director, Keepers of the Departments of Antiquities and of Fine Arts, and since 1921 a Deputy Keeper of Coins. The Lincoln and Merton Professor of Classical Archaeology and Art has charge of the collection of casts and of his departmental library, and the Slade Professor of Fine Art has his own lecture-room in the building.

From this sketch of the sources of the collections it will be clear that, while they cover between them wide fields of study, they are far from being complete or systematic, though much has been done since 1908 by interchange and arrangement to enhance the significance of each group. Many original specimens from the *Musaeum Tradescantium*, together with

the portraits of the Tradescant family, Elias Ashmole, and subsequent benefactors, and the first accession book of the Ashmolean Museum, however, are still exhibited together.

As regards accessions, all objects are welcomed which are fine examples of their kind, and illustrate the history and character of the group to which they belong, in relation to the studies pursued in the University.

The combined departmental libraries, with the Haverfield Library of Ancient History (especially rich in books on Roman Britain and other provinces of the Empire), the Bodleian collection of books on coins, and the library (mainly medieval and topographical) of the Oxford Architectural and Historical Society, offer ample facilities for advanced study within the general scope of the collections; for the older and the more costly books, however, reference must sometimes be made to the Bodleian, since they may not be borrowed thence, even by another University institution. Books may be borrowed from the Ashmolean library by members of the staff, and by other members of the University, who have been registered as readers. The library is open both in term and in vacation, except for short periods.

The studies most directly served by the Ashmolean collections are in Near-Eastern, Classical, and Medieval Archaeology, Medieval and Renaissance Art, Coins and Medals of all periods, and certain aspects of art in the Far East. Without attempting to recapitulate even the *Summary Guides* officially published for the Departments of Antiquities and of Fine Arts, the following notes on the principal treasures of the Ashmolean Museum may be useful.

§ *The Department of Antiquities*

For Mesopotamia, the Weld-Blundell collection of cuneiform inscriptions (1922) and the University's share of objects found at Kish by the joint expedition of Oxford and the Field Museum, Chicago, are supplemented by antiquities of all periods, Neolithic, Sumerian, Babylonian, and Sassanian, from Ur, Susa, Nineveh, and other principal sites.

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For Syria, Palestine, Asia Minor, Cyprus, and other parts of the Nearer East, principal series illustrate excavations near Carchemish, on sites in Cyprus, and in Palestine; and there is a very rich series of engraved sealstones from all parts of Western Asia.

For Egypt and Nubia, most of the series are from the excavations of the Egypt Exploration Society, the British School of Archaeology in Egypt, and Professor Griffith in Nubia, on predynastic, protodynastic, and XIIth and XVIIIth Dynasty sites. They include the type series from Nagada and Ballas, dated tomb-groups from sites in the Fayum, frescoes, foreign imports, and faience from Tell el-Amarna, and accurately dated and classified beads, scarabs, and *ushabti*-figures. Later periods are represented by finds from Naucratis, and from the Oxford excavations in Nubia (from early Dynastic to late Roman); and by Roman and Coptic textiles.

For the Prehistoric Aegean the collections from the Cycladic islands, and from Minoan sites in Crete, are exceptionally rich, thanks to the leading part taken by Sir Arthur Evans, D. G. Hogarth, and other Oxford men in travel and excavation. Of special value for students are the large series of pottery fabrics collected from many sites in the adjacent mainlands, as yet ill explored, and the rare original documents from the Palace of Knossos.

For Prehistoric Ages of western and central Europe, there is the pioneer collection of stone and bronze implements formed by Sir John Evans in the first days of scientific archaeology; and also notable material from southern Spain, the Swiss lake-dwellings, and Scandinavia.

For Prehistoric Britain, the Evans Collection is very rich, and there are the results of many excavations in Oxfordshire and neighbouring counties.

For classical Greece, the collection of painted vases, one of the finest in this country, illustrates all periods and styles. The bronzes, terra-cottas, fibulae and engraved gems include many fine examples: two bronze heads, recently acquired,

deserve special notice. Special series represent excavations at Sparta, in Cyprus, and near Kertch. To the sculptures of the old Arundel and Pomfret collections important additions have been made recently by gift or purchase; and the collection of casts, covering all periods from archaic to Graeco-Roman, meets all normal needs of the students of ancient sculpture. Among the inscriptions, the famous 'Parian Chronicle' has been already mentioned.

For the Early Iron Age of Europe, and especially of Italy and of Britain, many important objects, collected by Sir John and Sir Arthur Evans, serve to link British with continental development: particularly notable are specimens from the typical site at Hallstatt, and the contents of cremation graves at Aylesford, of La Tène period and unusually continental aspect.

The Roman Empire and the Migration Period are well represented. In the Roman section are interesting local finds: the Anglo-Saxon Collection includes the rich Evans series of fibulae and other objects; in both there is comprehensive material from continental sites. Late Saxon craftsmanship is illustrated by the splendid Alfred Jewel, presented in 1718, and numerous other important examples of jewellery from the same period.

Medieval Oxford constantly yields up examples of various fabrics of pottery, metal objects of daily use, coins, tokens, and seals, and occasional works of art of greater importance. Of these the Ashmolean collection has secured a valuable and ever-growing series, through friendly relations with the citizens, and especially with builders and cultivators.

The Coin Collections, accumulated by the University since 1636 and transferred from the Bodleian in 1921, are now supplemented by cabinets deposited by Balliol and New College, by the Howell Wills collection of Oriental coins, by the rich Barnard series of tokens and many valuable gifts from the present Deputy Keeper, Dr. J. G. Milne. In this connexion reference should be made to the large

and interesting coin collection in the Wake Archives at Christ Church.

§ The Department of Fine Art

In the Department of Fine Art, as in that of Antiquities, the collections have been acquired for the most part by gift or bequest, and commemorate the predilections of donors, as well as more general changes of taste. In certain groups they are ample and of high quality.

Italian art, of the fourteenth to sixteenth centuries, is illustrated in all its principal forms of expression by examples unmatched outside the great National Collections, such as Uccello's famous 'Hunt by Night'. With the earlier Italian pictures should be compared the remainder of the Fox Strangways collection in the Library of Christ Church.

The Fortnum sculptures, bronzes, medals, and majolica, collected as they were with an eye both to artistic excellence and to technical skill and the development of processes, are of unusual interest from every point of view. Specially notable are the terra-cotta head of Lorenzo dei Medici, the bronze head of Michelangelo, and the reliefs by della Robbia.

The original drawings include the greatest collection of Michelangelo and Raphael drawings in the world, and some of the finest by Rembrandt and Durer. Every school is represented by examples of the highest quality, and in conjunction with the Christ Church collection, they offer material of supreme importance to students both of Italian and of German achievement. The Douce Collection is very rich in early examples of wood-cutting and various kinds of engraving.

British water-colour art, again, is represented here by works of almost all the more distinguished artists, as well as by groups specially illustrating the technique of some others.

For the English Pre-Raphaelite painters, the collection formed by Thomas Combe, and bequeathed by his widow, has the additional interest of the association of both patron and artists with Oxford.

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The Hope Collection of Engraved Portraits is one of the largest of its kind and includes many rare and interesting prints. The drawings and prints selected by John Ruskin for the use of the Drawing School, which commemorates his teaching here, include sketches by Turner and by Ruskin himself, as well as isolated examples of other periods and styles. By arrangement with the Ruskin Trustees, sections of this series are exhibited in rotation in the public gallery.

The Museum is open on week-days from 10 a.m. to 4 p.m. throughout the year and on Sundays from 2 to 4 p.m. during Full Term. Admission is free to members of the University. Admission is also free to members of the general public on all afternoons from 2 to 4, and on Bank Holidays (excepting Boxing Day) from 10 a.m. to 4 p.m. At other times a fee of 6d. is charged except to parties (not exceeding five persons) accompanied by members of the University in academical dress, and to privileged students.

§ The Ruskin Drawing School

The Ruskin Drawing School, already mentioned, occupies part of the West Wing of the Museum, and is entered through the Randolph Gallery. It was founded by John Ruskin during his tenure of the Slade Professorship of Fine Art (1869-79) to perpetuate his teaching. It is managed by Trustees, and is open, under certain regulations, to the public as well as to members of the University. Students in this School have access for purposes of study to the collections of sculpture and casts, as well as to the valuable drawings and engravings in the school. The Ruskin Master of Drawing is appointed by the Trustees; he has the direction of the School, gives lectures, and conducts classes, admission to which is by fee.

§ The Indian Institute

The Indian Institute was projected in 1875, and founded by public subscription in 1880, and its building in Broad Street, begun in 1883, was completed in 1896.

It was founded 'to form a centre of teaching, inquiry, and information on all subjects relative to India and its inhabitants; to promote, stimulate, and encourage Indian studies of all kinds; to concentrate and disseminate correct ideas about India by concerted and combined action'. Its originator was Sir M. Monier Williams, K.C.I.E., Boden Professor of Sanskrit, who had the encouragement and support of a number of the Indian Princes, and of Lord Brassey and other statesmen at home. Its present building contains (1) a library of about 30,000 Oriental books, with Indian and other Eastern manuscripts, maps, periodicals, English and vernacular, official publications of the Indian and Provincial Governments; and the Malan collection of books; (2) a museum of select specimens of Indian arts and industries designed as a 'concise synopsis of India' for students; (3) lecture rooms, of which the largest holds about 400 persons; (4) the private rooms of the keeper, librarian, and University teachers of Indian languages, history, and law; (5) the office of the Delegacy for Oriental Students in Oxford.

The Institute is administered by a Board of Curators, and directed by the Boden Professor of Sanskrit as keeper *ex officio*. The library is open daily, except during August, to members of the University, and to other qualified persons by permission. All the regular courses of instruction in Indian languages, history, and law are given here, and also occasional public lectures by distinguished orientalists and administrators. Informal instruction and advice are also provided for selected candidates for the Indian Civil Service, and for Indian students in Oxford.

II. SCIENTIFIC MUSEUMS

By E. J. BOWEN

§ *The Old Ashmolean and the Lewis Evans Collection of Scientific Instruments*

THE history of the Old Ashmolean from its erection in 1683 as the first building in England designed for the teaching and advancement of science has been related above. In 1925, with help from the Goldsmiths' and other City Companies, the upper floor of the building was again opened as a museum to contain the beautiful and unique collection of early scientific instruments presented to the University by Dr. Lewis Evans. This collection, supplemented by gifts and loans from colleges and individuals, is now arranged to illustrate the teaching and methods of early science with contemporary instruments, and where these are unrepresented, or no longer exist, with models, combined with the display of contemporary scientific works and diagrams. The earliest are concerned with the measurement of time and the observation of the heavens, and are represented by a great variety of sun-dials, perpetual calendars and almanacks, and astrolabes, including the ancient astrolabe of Ahmad, made in A.D. 984, and probably the oldest dated scientific measuring instrument known.

Mathematical instruments include the circular scale of the earliest slide-rule in existence, and a series of calculating devices, counters, and later drawing instruments. The development of the telescope, from the work of Leonard Digges to the instruments of James Bradley and Sir William Herschel, and later, is illustrated with descriptions and exhibits, and the microscope by an extensive series of eighteenth- and nineteenth-century instruments, some of elaborate construction. Surveying is represented by theodolites, sextants, levels, and later measuring devices. The development of photography is illustrated by early wet-plate cameras and

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photographs, including some of the first pictures taken by Sir John Herschel, inventor of the method of fixing by 'hypo', and by H. Fox Talbot (1842). Among other early physical apparatus is a model of the air-pump invented by Robert Boyle during his residence in Oxford (1654-68) in Deep Hall. A fine group of instruments as used about 1690-1700, bequeathed by Lord Orrery to Christ Church, is deposited by that college, and Oriel College has loaned a collection of early electrical and pneumatical apparatus used for teaching purposes about a century later. Early chemical exhibits consist of apparatus, distilling vessels, gas-holders and generators, &c., as used in the Ashmolean Laboratory in the basement of the building about 1790-1820. A number of early surgical instruments deposited by the Royal College of Surgeons and the Radcliffe Infirmary are also exhibited. A selection from the zoological specimens of the original Tradescant collection is deposited in the Museum; they are probably the oldest museum specimens of the kind in existence. New College has supplied the very early Clutton collection of *Materia Medica*, of great importance for the identification of older medicinal preparations, and from St. John's College has come the Pointer collection (1720) of local sands and clays arranged in their proper sequence, forming the oldest existing stratigraphical collection. Another early collection of naturalia from Oriel College contains a number of fossils that have the peculiar interest of being type specimens from the long lost collections of the second Keeper of the Ashmolean, Edward Llwyd.

The Museum is open to the public from 11 a.m. to 1 p.m., and from 2 p.m. to 4 p.m. on weekdays.

§ The University Museum

The foundation stone of the New University Museum in the Parks was laid in 1855, and the building was structurally complete in 1860. Its erection had been vigorously urged for some years by Dr. Henry Acland, afterwards Regius Professor of Medicine, and to him, influenced by John Ruskin, is also

due the choice of the general plan and style of the building. Acland hoped that work in the scientific departments of the Museum would become a necessary part of the training of all undergraduates; and that scientific specialization would be permitted only after a degree in the humanities had been obtained. These hopes were destroyed by the unexpectedly rapid growth of all branches of science, and a simultaneous increase of standards of the other courses of study.

The design of the New Museum was one of great originality, and if it failed to secure the unqualified approval even of Ruskin, it must be remembered that its sponsors were handicapped by lack of funds. In plan the design consists of a glass-roofed centre court, surrounded on three sides by laboratories and lecture-rooms. The front, facing west, was originally allocated to Medicine (NW.) and to Chemistry (SW.), the chemical laboratories, including the large laboratory recalling the Abbot's Kitchen at Glastonbury, being separated from the main block and connected with it by a passage. On the south side of the quadrangle were the departments of Experimental Philosophy and of Mineralogy and Geology, while the north side was occupied by the Anatomical, Physiological, and Zoological departments. The east side was left for extensions.

With the building of new laboratories in the neighbourhood the allocations of departments to rooms in the Museum have from time to time been altered, and the collections have undergone many rearrangements. Most of the older specimens which survive, as the remaining examples of the original Tradescant specimens (skulls and horns, &c.), a few of the fossils collected by Llwyd about 1690, and the extensive collection of fossils presented by Dr. Buckland, are incorporated in the general arrangements of exhibits, though they are labelled with their origin when this is known.

In the centre court on the south side are cabinets of minerals under the care of the Waynflete Professor of Mineralogy and Crystallography. The collection of minerals comprises some 20,000 specimens, of which about 3,000 are exhibited in

table cases, while the bulk of the remainder are stored in drawers beneath.

The following special collections are also exhibited: a collection of isolated crystals of minerals; a collection of pseudomorphs, illustrating the alteration of composition which minerals may undergo; a collection of rough and cut gemstones, illustrative of the decorative uses of minerals; and a representative collection of meteorites, illustrating the various types of composition and structure of these bodies. Ranged along the west wall of the court are two flat cases containing a series of specimens arranged to form an introduction to mineralogy, for the use of students, and two vertical cases on the north side of the collection contain a series of specimens and models forming similarly an introduction to the study of crystals and illustrating their mode of growth, symmetry, geometrical and physical characters, and intimate structure. In other cases are placed the marbles of the famous Corsi collection, presented to the University by S. Jarrett in 1828.

The south-eastern part of the court, and the south and east arcades, are occupied by geological collections under the charge of the Professor of Geology. In the upright cases of the lower east and south arcades is a general collection arranged to illustrate the history of life on the earth from its earliest appearance in the Cambrian rocks down to the close of Pliocene times. The exhibition cases at the east end of the central court contain a collection of the fossils characteristic of the stratified rocks of the country around Oxford. In a vertical frame at the east end of the central court is a fine series of photographs of the quarries and other excavations from which the fossils have been obtained, as well as much of the information on which the knowledge of the structure of the country depends. The upright cases on one side of the avenue adjoining the Zoological half of the central court are devoted to the Reptilia, some of local origin, including bones of the *Ceteosaurus Oxoniensis*, one of the largest reptiles in the world. The upper east arcade is chiefly occupied by collections which illustrate the successive stages in the evolution

Prehistoric, are arranged with a view to demonstrate, either actually or hypothetically, the development and continuity of the material arts from the simple to the more complex forms. To show the variations by means of which progress has been effected, and the application of varieties to distinct uses. To assist the question as to the Monogenesis or Polygenesis of certain arts; whether they are exotic or indigenous in the countries in which they are now found. . . . To these ends, objects of the same class from different countries have been brought together, but in each class the varieties from the same localities are usually placed side by side, and the geographical distribution of various arts is shown in distribution maps.' With minor modifications, the many later accessions have been arranged according to this system, and many new series have been added to the original ones.

The University Museum is administered by a Delegacy consisting of the Vice-Chancellor and Proctors and Delegates elected by the Congregation of the University. The Secretary's office is to be found in the lower arcade on the north side of the court.

The exhibited collections, including the Pitt-Rivers, are open from 10 a.m. to 4 p.m. free to members of the University and to other persons accompanied by a Master of Arts, or by a member of the University engaged in work in the Museum or its Departments. Visitors other than the above are admitted from 10 a.m. to 2 p.m. on payment of a fee of sixpence, and from 2 p.m. to 4 p.m. on payment of threepence. On Thursdays and Saturdays admission is free between the hours of 2 and 4 p.m.

EDUCATION IN THE CITY OF OXFORD

By A. C. CAMERON, M.C., M.A.

THE Educational System of England is a partnership between the Central and the Local Authority. The Central Authority lays down the main lines of policy, subject in its turn to Treasury control, and contributes roughly one-half the cost, satisfying itself through its expert inspectors, that the money has been wisely bestowed. The Local Authority formulates its schemes within the framework of the National system, and administers the services in its area. Oxford is a County Borough of 80,000 inhabitants, exercising full powers under the Education Acts over both Higher and Elementary education. The City Council, as the Local Education Authority, has delegated most of its powers to an Education Committee, but retains (with the statutory power of raising a rate or borrowing money) control over the cost of new school buildings. The Education Committee consists partly of members of the Local Education Authority and partly of members co-opted because of their special knowledge of education, including representatives of the University.

The Oxford Education Committee has to face the problems common to other Committees, but there are additional factors here which create for Oxford its individual problems. On the one hand there is the University, which for some centuries dominated not only its own societies but also the life of the City. Within the last thirty or forty years the position has completely changed. Better facilities for transport have made Oxford an increasingly important centre for country shoppers. Residential Oxford has increased as more and more people choose the shadow of their old University for their retirement. Perhaps most important of all, a new and important industrial suburb has grown up in the east. Headington and Cowley, once outlying villages, are now satellite towns included within the extended boundaries of the City. There is a steady flow of population from the centre of the town to the

of man, and includes the large series of mammalian remains collected by Dr. Buckland from the bone caves of England and the Continent.

The northern half of the centre court contains the Zoological collections under the care of the Linacre Professor of Comparative Anatomy. The exhibits are arranged to illustrate the various groups of the Animal Kingdom in approximately a natural sequence from the lower forms to the higher. Selections of representative members of the various groups are shown, together with such labelled dissections and preparations of the soft parts or skeleton as are necessary to illustrate the characteristic structure. The groups of invertebrate animals are displayed in the range of sloping cases on the north side of the court, beginning at the west end. The remaining upright cases are devoted to the Vertebrates. On the north wall is an exhibit illustrating the osteology of fossil and modern Man and comparing the structure of Man and Apes. Almost in the centre of the court is a case containing a number of specimens of the 'Stonesfield Jaws', remains of the earliest known mammalia, from the Mesozoic period. Nearby are the unique remains, a head and foot, of the extinct dodo from Mauritius. The complete specimen belonged to the original Tradescant collection (c. 1656), and after a century of exhibition in the Old Ashmolean Museum had fallen into a neglected state, and was ordered to be destroyed by the Vice-Chancellor and the Museum Trustees. Fortunately the head with integument and a foot were preserved by the Keeper of the Museum.

In the upper arcade are collections of birds, and in addition a collection of bird skins and extensive collections of osteological and spirit material are preserved in the neighbouring Department of Zoology and Comparative Anatomy.

In the upper arcades, on the west and south sides, is the Hope Department of Zoology. A few of the specimens belonging to this department are exhibited in open cases in the south arcade, but the majority are stored in the room adjacent, and permission to examine these should be obtained

from the Professor. The Department originated in 1849, when the Rev. F. W. Hope presented his entomological collections and library to the University. After his death additions were made to the collections and the endowment by his widow, and since that time the department has been enriched by a very great number of valuable accessions too numerous to be described here. Many of the groups have been worked out and arranged, including the Pierinae, Acraeinae, Blattidae, the Oriental Moths, a large part of the Hymenoptera, the Coleoptera Phytophaga, the Lycaenid and Hesperiid Butterflies, and the British Insects. Of special value to students, and a distinctive feature of the department, are the series of specimens, chiefly of butterflies, arranged to illustrate the problems of Insect Bionomics in a wide field. These collections include examples of Protective or Procryptic Resemblance; Mimetic Associations; Bred Families of Dimorphic or Polymorphic Mimics and of Seasonal Forms with their Female Parents; evidence of the attacks of birds and lizards on butterflies; examples of butterflies in which scents have been detected; Predaceous Insects and their Prey; collections illustrating the problems of distribution and isolation; and illustrations of Insect Migration.

Opening from the eastern lower arcade is the Pitt-Rivers Museum, under the care of the Curator. It was completed in 1885 to contain the very important ethnological and archaeological collections presented to the University by General A. H. L. F. Pitt-Rivers. Around this valuable nucleus the Museum has been greatly developed by accessions. These include a series of objects from the South Seas collected during the voyages of Captain Cook, transferred with other collections from the Ashmolean Museum in 1886, and a very great number of gifts, many of which are of high scientific importance. Accessions by purchase have from time to time been acquired, when the funds have permitted.

The arrangement of the exhibits in synoptic typological groups follows the pioneer system initiated by General Pitt-Rivers; in his own words, 'The specimens, Ethnological and

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periphery as schemes for clearing congested areas come into operation; but the main flow to the new houses comes from outside the area. About one child in twelve attending the Oxford elementary schools migrated into the area during the preceding twelve months; and there are many more families waiting outside Oxford for their chance of a house.

Thus there is a rather special problem in elementary education. There are some 10,000 children in the schools to-day as against 7,168 in 1925, and 8,469 in 1929, just after the City boundary was extended. The main provision was originally in Non-provided Schools situated in the more populous parts of the old City area, where parochial patriotism runs high. When the Oxford School Board came into being in 1871 it built at first no schools, and up to 1929 there were still (in addition to two selective central schools) only three Council Schools in west, south, and east Oxford respectively. These small schools taking children of the full age range, 3 to 14, had perforce gradually become smaller; and some ten years ago the case for closing some departments and regrouping the others into seniors and juniors was, at least, as strong in Oxford as in any other city. The need for improvement in the buildings retained in use was no less urgent. In consultation with the Diocesan Authorities, who most loyally responded to the appeal of the Authority, a regrouping scheme was adopted which, though still incomplete, enhanced the efficiency of the school system, and enabled economies in the neighbourhood of £10,000 per annum to be made. Consequently the Non-provided School Managers have spent upwards of £35,000 on remodelling and extending old, and erecting new, buildings. There is now no school in Oxford remaining on the 'black list' compiled by the Board of Education in 1925.

In the outer areas east of Magdalen Bridge the building problem has been too great for Church Authorities to undertake, and the Committee has made itself responsible for the bulk of the senior and for some of the junior and infant accommodation. The policy has been to provide in each

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centre of population (such as Headington and Cowley) a senior school which shall be an amenity centre for a new area still lacking much that is associated with urban life. One school has been erected; another is in process of erection. Both will be used extensively for evening institute work, and the approval of the Board has just been obtained to the erection in light material of gymnasium and shower baths, which will be used by day for the senior scholars and in the evening by clubs of adolescents, whether organized in evening classes or not. We hope that a swimming-bath may be added.

The modern organization by which infants and juniors up to eleven are taught in schools of the primary stage and then selected by examination, and redistributed into various types of post-primary schools, will be familiar. Oxford, like other Authorities, holds an Annual Schools Examination taken by children who are between the ages of 11 and 12 on the 1st August in the year of examination. Papers are set in Arithmetic and English based on the work of fourth-year classes in progressive junior schools. About 25 per cent. of the age group are selected for further examination, which consists of a Group Intelligence Test and an interview by the Examination Board, at which the recommendation of the school Head is taken into account. On the result of the two parts of the Examination taken together, a final order of merit is established; and the various places available in secondary schools are offered accordingly. The area is fortunate in the variety of schools in which scholarships can be held, including schools not provided by the Authority. Those children who fail on the result of the Annual Schools Examination to get places in a secondary school or to reach the particular school at which they aimed, have a second chance of sitting in a Senior Scholarships Examination between the ages of 13 and 14; this allows the late developer to show his worth. Again, children whose bent lies rather in craftwork than in book-learning have a chance between the ages of 13 and 14 to secure by examination a form of higher education suited to their needs at the junior department of

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the Schools of Technology, Art, and Commerce, which offers a two- or three-year course in combined general and craft instruction in preparation for the three main industries of the City: Engineering, Printing, and Commercial occupations.

Secondary Education for Boys is provided in three schools. Magdalen College School is maintained by Magdalen College, originally as a choir school, and now also as a public school taking day and boarding pupils. The City of Oxford High School for Boys is maintained by the City Council. It is housed on its original rather cramped site, where the main buildings are distinguished but incomplete for the needs of a modern Grammar School, and likely shortly to be extended. The School has great prestige in the City, and has a distinguished record of University successes. A third secondary school for boys, Southfield School, newly erected in the most populous part of Oxford, on a 15-acre site, absorbed two schools—the old Municipal Secondary School and the old selective Central Boys' School. Its curriculum is related with that of the City of Oxford High School for Boys, and is mainly concerned with the provision of sound education up to 16+, though with scope for advanced work.

Corresponding with Magdalen College School, the Oxford High School, established by the Girls' Public Day School Trust, provides for a number of local girls. Milham Ford School is a maintained school for girls which has succeeded in creating a fine tradition in extremely inadequate premises. Plans are now before the Board of Education for the erection of a new and modernly equipped school on a 15-acre site. There remains the selective Central Girls' School, which provides, under the regulations of the Board of Education for elementary schools, an education definitely post primary in character, though a variation on the normal secondary school curriculum. This accords with modern precept, which emphasizes the importance of variety in the type of post-primary provision.

These schools between them provide places for some 10 boys and 10 girls per thousand of the population: a proportion

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now generally regarded as desirable. Admission is through one of the examinations already described, or, for fee-paying pupils, through an internal examination by the Head of the School. The remainder of the senior pupils go to a senior school. These range from modernly built and equipped three-stream senior schools (schools, that is, that admit annually three parallel forms of scholars) to smaller Non-provided Schools which serve isolated areas of the City and contain in one building, organized under one head teacher, both junior and senior sections. The facilities for practical work necessarily vary from school to school. Handicraft and Domestic Science are available for all, if not in the schools themselves at least in a centre, and the newer schools have in addition special facilities within their own domain for art, needlework, science, and gardening.

There remains the provision of what is known as Further Education: that is, part-time evening work in art, crafts, or technology, either in the Schools of Technology, Art, and Commerce, or in one of the dependent evening institutes, or the full-time study of such subjects in the main schools. Not the least important result of the recent opening of Southfield School for Boys was the removal of the Municipal Secondary School from the confined premises where the main Schools of Technology, Art, and Commerce were and still are conducted. This made it possible for the first time to hold classes during the day-time for young men and women engaged in industry and commerce. Simultaneously, a Junior Day Department (referred to above) was opened with upwards of 100 pupils preparing for careers in industry, commerce, or industrial art, and receiving continued general education for two or three years from the age of 13+, to include in the second and third years definite technical preparation for the art, craft, or occupation the boy or girl is going to follow. These developments, long overdue, have shown how inadequate as a whole these premises are. More than half the organized classes forming part of the central Schools of Technology, Art, and Commerce are conducted outside that

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building in temporarily leased premises; the course in Building Construction, now under the control of two qualified architects, and recognized for National Certificates, in one place; the School of Architecture, recognized by the R.I.B.A. as providing exemption from the submission of set work at their Intermediate Examination, in a second; Handicraft in another, and much of the Commercial work in yet a fourth. Day classes for engineering apprentices, now recognized as offering a suitable preparation for both the National and the Higher National Certificate in Engineering, require far larger premises than they have at present if they are to meet the needs of a growing industry. The printers have been lucky in finding a temporary home within the hospitable walls of the Oxford University Press, whose constructive help has done much to form and maintain their classes. In fact, on all sides there is a new and healthy industrial growth in the City for which the Local Education Authority is bound to make proper provision. Preliminary proposals have been approved by the Board of Education for the provision of a new College of Further Education, and the preparation of plans for its erection and equipment is one of the most important duties now before the Committee.

When this building is erected, the combined Schools of Technology, Art, and Commerce will be housed on one site. But there will still remain the contributory junior institutes the outlying parts of the City, of which there are at present . . . These will continue to provide in their areas for the well-being of adolescents, and act also as feeders to the main Schools. Their connexion with the main Schools is emphasized. The Schools themselves are under one Principal; and he is also responsible for the organization of the junior institutes, which are thus brought within the direct influence of the main Schools and share the benefit of their expert teachers. At the same time the Committee are seeking closer association with the voluntary bodies interested in the welfare of the adolescent. Instructors are provided for any club or group that can offer a reasonably sized class, under

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the ordinary regulations for further education. In particular, the Committee have been impressed by the fact that boys or girls who have left school at 14 and gone into work are those who most need care and guidance and opportunity for physical as well as mental recreation. In default of day-continuation schools, the only effective contact with such young people is by means of clubs and evening classes. Proper organization of these facilities may keep many out of the juvenile courts. A newly appointed woman officer on the Committee's staff has the special duty of keeping contact between these voluntary organizations and the Committee on the one hand, and the Principal of the Schools of Technology, Art, and Commerce on the other, and of securing that their needs are made known and met so far as possible.

The health of school children in Oxford, as in other areas, is under the control of a School Medical Officer who is also Medical Officer of Health. Thus the Medical work of the schools is done by doctors who also work on public health matters, and the school nursing by public health nurses. This makes for continuity in records and in the medical care of individual children and families, while at the same time contact is kept with the school system, since this as other services of education are administered through the Committee's Chief Administrative Officer. Included in the medical service is school dentistry.

On the general health side a child is examined four times in his school career: on admission, from 3 to 4, at the ages of 8 and of 12, and before he leaves at 14. In addition, Clinics are provided in separate buildings for the treatment of minor ailments, and the local hospital services are utilized for the treatment of major needs, removal of tonsils, adenoids, &c., ophthalmic and orthopaedic treatment. The school Dental Surgeon examines every child once a year, and treatment may be had either from the School Dental Surgeons or from the parents' own dentist.

Within the main school provision the Committee now has a complete scheme of treatment for children who vary from

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the normal. Its central feature is the educational clinic, the first of its kind to be provided by a Local Education Authority in England, at which problem children are examined by experts. Whatever degree of retardation is found in a particular child there are now available, as may be suitable for the individual case, organized classes for the backward in the larger schools: special observation classes at Rose Lane School, which are intended less for backward children than for children presenting problems of behaviour and emotional life; the day special school for the higher grade mentally defective children at Bayswater Rise; and, in adjoining premises, the Occupation Centre for those who have been notified to the proper authority as ineducable. Children attending any one of these are under constant medical review, and the organization is such that they can readily be shifted from one type of school or class to another.

On the side of physical weakness a special open-air school receives children selected by the School Medical Officer. Increasing use is also made by whole classes of facilities generously provided at Wytham on his own estate by Mr. ffennell, where each class gets once a week a whole school day under open-air conditions, with adequate shelter. This has proved of great value to the health, the school work, and the general outlook of the children who go to Wytham. A swimming bath is now available on the site. It is proposed this

that two groups, one of senior boys and one of senior girls should go out, each for a fortnight, to the new dormitory building which Mr. ffennell has added.

Again, following the growing national recognition of the close association of bodily and mental health, the provision of school playing-fields is being steadily increased. Fields for, e.g., football games need different treatment from public open spaces. The one must be fenced off for their special purpose, the other is, by definition, open. Therefore, apart from what the Council's Open Spaces Committee is doing, the Education Committee hopes to provide suitable fields in every quarter of the City for schools to play team games

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under supervision. These grounds are also available at a nominal charge for adolescent club teams, and all but two areas of the City have now been more or less satisfactorily covered.

School swimming, as is proper in a river town, has a place in the organized teaching of all schools. It is worth recording that at the end of last summer term over fifty boys at one Secondary School could swim a mile. The success of school swimming depends on a warmed and covered bath or baths being available for instruction all the year round. One such bath is at present available, and it is hoped that this may soon be reproduced in other parts of the City.

In connexion with the welfare of children reference should also be made to the change in the work of the School Attendance Officers and the growth of their duties. So far from school attendance being now their main concern, it occupies less than half their time, and this changed position is reflected in a change of name. The School Attendance Officer has become the School Care Officer; and his main work can be called comprehensively welfare work. New legislation has contributed largely to this, in particular the Children and Young Persons Act 1933. This Act places upon a Local Education Authority the task of bringing before the Juvenile Court any child or young person who is in need of care and protection, and extends the age of a 'young person' to 17. In addition, the Education Committee, to whom the powers of the Council under this Act have been delegated, have to present a report to the Juvenile Court on any case that comes before it, whether of a juvenile delinquent or of a child or young person in need of care or protection. These cases (whether they eventually come to Court or not) involve lengthy investigation and much detailed arrangement to secure the well-being of the child or young person, who may also be placed by the Court under the care and protection of the Education Committee.

In the foregoing I have tried to suggest in outline how the general system of English education is illustrated in

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Oxford. I need not say that I have no desire to exalt Oxford above other areas, which have their own problems and which have found their own solutions; I wish only to emphasize how much variety is possible within the general system of English Education, and how far the Local Authority can choose what particular types of school it will provide to meet its special needs. The system provides freedom within which an enterprising Authority (and the majority of Authorities throughout the country are enterprising) can experiment on its own lines, and can in turn both learn from and teach its neighbours.

OXFORD AND POETRY

By R. KENNARD DAVIS, M.A.

IT is not surprising, in view of the part played by Oxford in the National life, that the list of famous writers who have celebrated her fame should be a long one, nor will those who know the charm of the City and surrounding country marvel that their praise should have inspired poets known and unknown throughout the ages. Only a short selection can be given here from their tributes.

The earliest noteworthy references to Oxford in English poetry are in Chaucer's *Canterbury Tales*. The Prologue introduces us to a 'Clerk of Oxenford', with

Twenty bokes clad in blak or reed
of Aristotle and his Philosophye.
at his beddes heed

In the *Miller's Tale* we hear of a 'poore scoler' with his
bokes grete and smale
and al above ther lay a gay santrye
On which he made a nightes melodye
So swetely that al the chambre rong.

From which we may gather that a love of cheerful music—whether of harp, piano, or gramophone—has characterized the undergraduate from earliest times.

Sir John Davies (1560–1618) is among the earliest to praise the beauty of Oxford's scenery:

But Oxford, Oh, I praise thy situation
Passing Parnassus, Muses' habitation!
Thy bough-deckt dainty walkes, with Brooks beset
Fretty, like Christall Knots, in mould of Jet.
Thy stately Colledges like Princes' Courtes
Whose gold embossed, high embattled Ports
With all the glorious workmansippe within
Make Strangers deeme they have in Heaven bin.

A century later, Thomas Tickell draws a picture of the

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student's life which may perhaps provoke an incredulous smile from the cynic of to-day.

Here Colleges in sweet confusion rise,
There temples seem to reach their native skies;
Spires, towers and groves compose the various show,
And mingled prospects charm the doubting view.
See how the matchless youth their hours improve
And in the glorious way to knowledge move!
Eager for fame, prevent the rising sun,
And watch the midnight labours of the moon.
Not tender years their bold attempts restrain
Who leave dull time and hasten into men;
Pure to the soul and pleasing to the eyes,
Like angels youthful and like angels wise.

The list of famous names of those who have written in praise of Oxford is long; and among them are Dryden and Dr. Johnson, Wordsworth, Newman and Keble, Beddoes, Wilde, Watts-Dunton, Robert Bridges, Alfred Noyes, and J. W. Mackail; and many less known poets have added blossoms to her crown. Most famous of all, perhaps, are the lines from 'The Scholar Gipsy' into which Matthew Arnold has woven the music of Oxford names and the quiet of Oxford meadows and streams:

For most, I know, thou lov'st retired ground.
Thee, at the ferry, Oxford riders blithe,
Returning home on summer nights, have met
Crossing the stripling Thames at Bab-lock-hithe,
Trailing in the cool stream thy fingers wet,
As the slow punt swings round:
And leaning backwards in a pensive dream,
And fostering in thy lap a heap of flowers
Plucked in shy fields and distant Wychwood bowers,
And thine eyes resting on the moonlit stream.

And then they land, and thou art seen no more.
Maidens who from the distant hamlets come
To dance around the Fyfield elm in May,

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Oft through the darkening fields have seen thee roam,
Or cross a stile into the public way.

Oft thou hast given them store
Of flowers—the frail-leaf'd, white anemone—
Dark bluebells drench'd with dews of summer eves—
And purple orchises with spotted leaves—
But none has words she can report of thee.

And, above Godstow Bridge, when hay-time's here
In June, and many a scythe in sunshine flames,
Men who through those wide fields of breezy grass
Where black-wing'd swallows haunt the glittering Thames,
To bathe in the abandon'd lasher pass,
Have often pass'd thee near
Sitting upon the river bank o'ergrown:
Mark'd thy outlandish garb, thy figure spare,
Thy dark vague eyes, and soft abstracted air;
But, when they came from bathing, thou wert gone.

At some lone homestead in the Cumnor hills,
Where at her open door the housewife darns,
Thou hast been seen, or hanging on a gate
To watch the threshers in the mossy barns
Children, who early range the slopes and late
For cresses from the rills,
Have known thee watching, all an April day,
The springing pastures and the feeding kine:
And mark'd thee when the stars come out and shine,
Through the long dewy grass move slow away.

In Autumn, on the skirts of Bagley wood,
Where most the Gipsies by the turf-edged way
Pitch their smoked tents, and every bush you see
With scarlet patches tagged and shreds of grey,
Above the forest ground call'd Thessaly—
The blackbird picking food
Sees thee, nor stops his meal, nor fears at all;
So often has he known thee past him stray
Rapt, twirling in thy hand a wither'd spray,
And waiting for the spark from Heaven to fall.

And once, in winter, on the causeway chill
Where home through flooded fields foot-travellers go
Have I not pass'd thee on the wooden bridge
Wrapt in thy cloak, and batting with the snow,
Thy face towards Hinstey and its wintry ridge?
And thou hast climb'd the hill
And gunned the white brow of the Cumnor range,
Turn'd once to watch, while thick the snow flakes fall,
The line of festal light in Christ-Church hall —
Then sought thy straw in some requester'd grange.

In more recent years Lionel Johnson has described the historic grandeur of the City and the love which she inspires in the following lines:

City of weathered cloister and worn court;
Grey city of strong towers and clustering spires;
Where art's fresh loveliness would first resort;
Where lingering art kindled her latest fires.

Where, on all hands, wondrous with ancient grace,
Grace, touched with age, rise works of goodliest mien,
Next Wykeham's art obtain their splendid place
The zeal of Inigo, the strength of Wren.

Where at each coign of every antique street,
A memory hath taken root in stone,
There, Raleigh shone; there, toiled Franciscan feet;
There, Johnson flinched not, but endured, alone.

There, Shelley dreamed his white Platonic dreams,
There, classic Landor throve on Roman thought,
There, Addison pursued his quiet themes,
There, smiled Erasmus, and there, Colet taught.

Over, the four long years! And unknown powers
Call to us, going forth upon our way;
Ah! turn we, and look back upon the towers,
That rose above our lives and cheered the day.

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Proud and serene, against the sky, they gleam.

Proud and secure, upon the earth, they stand:
Our city hath the air of a pure dream,
And here indeed is an Hesperian land.

Think of her so! the wonderful, the fair.

The immemorial and the ever young:
The city, sweet with our forefathers' care;
The city, where the Muses all have sung.

Ill times may be; she hath no thought of time;

She reigns beside the waters yet in pride.
Rude voices cry; but in her ears the chime
Of full, sad bells brings back her old springtide.

Like to a queen in pride of place, she wears

The splendour of a crown in Radcliffe's dome.
Well, fare she well! As perfect beauty fares;
And those high places, that are beauty's home.

But the poem which most aptly expresses the feelings of the hundreds who leave Oxford each year to carry her picture in their hearts through life, is probably Quiller-Couch's '*Alma Mater*'.

Know you her secret can utter?

Her of the Book, the tripled Crown?

Still on the spire the pigeons flutter

Still by the gateway flits the gown:

Still in the street, from corbel and gutter

Faces of stone look down.

Faces of stone and other faces—

Some from library windows wan

Forth on her gardens, her green spaces

Peer and turn to their books anon.

Hence, my Muse, from the green oases

Gather the tent, begone!

Nay, should she by the pavement linger,

Under the rooms where once she played,

Who from the feast would rise to fling her

One poor sou for her serenade?

One poor laugh for the antic finger

Thrumming a lute-string frayed?

Oxford and Poetry

Once, my dear—but the world was young then—
Magdalen elms and Trinity limes—
Lissom the oars and backs that swung then,
Eight good men in the good old times—
Careless we and the chorus flung then
Under St. Mary's chimes!

Reins lay loose and the ways led random—
Christ-Church meadow and Isley track—
Idleness horrid and dog-eart (tandem)
Aylesbury grind and Bicester pack—
Pleasant our lines and faithful we scanned 'em
—Having that artless knack.

Come, old limner, the times grow colder;
Leaves of the creeper redder and fall,
Was it a hand, then, clapped my shoulder?
—Only the wind by the chapel wall.
Dead leaves drift on thy lute; so fold her
Under thy faded shawl.

Never we wince though none deplore us,
We who go reaping that we sowed;
Cities at cock-crow wake before us—
Hey, for the lilt of the London road!
One look back and a rousing chorus,
Never a palinodel!

Still on her spire the pigeons hover;
Still by her gateway haunts the gown;
Ah, but her secret? you, young lover,
Drumming her old ones forth from town,
Know you the secret none discover?
Tell it when *you* go down.

Yet if at length you seek her, prove her,
Loan to her whispers never so nigh;
Yet if at last not less her lover
You in your hansom leave the High;
Down from her towers a ray shall hover—
Touch you, a passer-by.



23. INTERIOR OF THE UNIVERSITY CHURCH (ST. MARY'S)
From Ingram's MEMORIALS

SPORTS AND GAMES IN OXFORD

THE CITY

By J. R. BENSON, M.A.

THE statement that Oxford is exceptionally well provided with playing-fields is often made, and to some extent this is true in so far as the colleges and University are concerned. But with the City the position is not quite so satisfactory. Since the population has increased so rapidly, and the boundaries have been extended to include Headington, Cowley, Iffley, and Wolvercote, the existing accommodation is thought to be insufficient to meet the reasonable requirements of the near future.

Fortunately the City Council has recognized this, and, as opportunities have arisen, has taken steps to secure more adequate provision for the children and adolescents. While speaking of the shortage of grounds one must give the fullest meed of praise to the colleges and University for so readily and generously placing their splendidly equipped grounds at the disposal of the local clubs during the long vacation, when the grounds are not fully in use.

Even so, we have no ground where facilities for training in athletics of all kinds are provided. This is a serious defect, and will, we hope, be remedied in the near future. The local Education Committee has set an example in that it has within the past five years provided and equipped four grounds as playing-fields on which the children of the elementary schools can take regular exercise and physical training under the supervision of the sports' master or mistress. Something has also been done by the Open Spaces Committee of the City Council, but there is very heavy leeway still to be made up.

To speak fully of the sports and games of Oxford would be a colossal task, and would occupy space in this volume far beyond what has been allotted to this subject.

It will generally be conceded, I imagine, that Association football is the most popular outdoor game practised in the

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City, and I suppose it will also be conceded that the Oxford City F.C. is the most prominent and best-equipped club in this area. Certainly the amount of popular support accorded to its games by the Oxford public is a most gratifying feature to those who are responsible for its management. The club is a purely amateur organization, and has reached the final round of the national competition for the Amateur Cup on three occasions, while on one occasion it won the trophy. The club is a much travelled club, and has in past years accepted invitations to play matches in most of the countries on the continent of Europe. Prominent among their more important tours were those to Portugal, Rumania, and Hungary, while Germany has been visited on several occasions. Other countries which have been visited more than once are Holland, Belgium, and France. The club has in past years produced many famous players whose names would conjure up reminiscences of a pleasant nature. In one international match versus Germany, five of the team representing England were playing members of this local club.

It may be interesting to learn that the whole of the Association football played within this city and county is under the direct jurisdiction of the Oxfordshire Football Association. The supervision of the 200 clubs calls for a close and careful administration. There are numerous competitions for the county clubs, the most important one of which is the Senior County Cup. The Charity Cup also produces keen competition, and the charities of the locality benefit accordingly. Nearly every town in the county has its own charity competition.

Among the elementary schools there are also several leagues and knock-out competitions, and in this direction the Oxford boys have fared very successfully in contests with other towns. The latest effort to improve the standard of football throughout the country has been the adoption of a plan for the coaching by first-class professional players of the pupils in the secondary schools.

Oxfordshire schools have taken advantage of this splendid

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offer, and much is expected during the next few years. Since Oxford has become industrialized, the number of 'Works' teams has increased, and it is hoped that the general health and stamina of the work-people have likewise improved.

The followers of the Rugby code have lately become most energetic in forwarding the claims of this form of recreation. The secondary schools have thrown themselves wholly into the game, and from their ranks it is expected that prominent players will emerge. The 'Exiles' club is coming rapidly to the front, and is competing with some of the best Rugby teams in the locality. As with the Association game, the 'Works' teams are making known their presence, and the future of the game in Oxford is very bright indeed.

The field-game of Cricket is, and always has been, a very popular and generally played game by boys and men of all ages.

The Oxford City C.C. is still a prominent feature of local cricket, and commemorated its centenary last year. Very few cricket clubs can boast of an existence of over a century. During the long vacation the members of this club may be found on Merton College ground, and short terms of membership are open to visitors for the summer season. The Oxfordshire C.C. is not ranked among the first-class counties, but has met with considerable success in its matches against other counties of medium strength. There are numerous other clubs, and these have organized league competitions and other forms of contests which assist in maintaining interest in the games throughout the cricket season.

The Schools' Cricket Scheme, inaugurated and carried out by Mr. J. R. F. Turner of this City, is possibly the most widely known cricket organization in the world (saving such a famous club as M.C.C.). The basis of the scheme is the readiness of the colleges to allow the elementary schoolboys to use their splendid grounds in the evenings of the summer season, and by this means more than 1,000 Oxford boys benefit by the excellence of the grounds and the expert coaching by the undergraduate members of the colleges.

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The value of these associations with the members of the University is incalculable. The obvious results are an improvement in physical development, and a high standard of cricket as judged by schoolboy standards. Mr. Turner has the infinite satisfaction of knowing that his scheme is at once so simple and yet so comprehensive as to admit of imitation and adoption in many quarters of the globe. Fortunate is the boy who can say he was coached by an Oxford 'Blue'. Already the first-class counties have taken into their ranks about a dozen of the best Oxford boys. Hampshire, Surrey, Gloucester, and Northampton have benefited by taking over recruits from the scheme.

The Isis Hockey Club, a body composed largely of University men resident in the City, has made a great name for itself and its players. To have been a playing member of this famous club is sufficient to mark the man as a first-class exponent of the game. Singularly enough, this club, too, owes its inception and growth to Mr. Turner who, himself, was no mean player. The game has in recent years become enormously popular, and numerous clubs have sprung up among both men and women. 'Works' clubs, and clubs for girls in the business establishments, now afford many opportunities which heretofore had been lacking. The Education Committee places its playing-fields at the disposal of adolescent clubs when the grounds are not required for the school-children. Each of our secondary schools (boys' and girls') has its hockey section.

Lawn Tennis is another game which has made enormous strides in popularity. The number of clubs which have sprung up is legion. Boys and girls commence to play at an early period in life, and consequently reach a high standard of efficiency by the time they attain adult age. Much of the enthusiasm for the game in Oxford is due to the publicity given to its doings by the competition promoted by one of the local newspapers. This competition embraces all classes and standards of players, and that scores of clubs and individuals enter is an indication of its usefulness to the

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game. All the tennis courts provided in the public recreation grounds are quickly taken up, and insistent demands for more courts are continually being made.

The presence of the Thames provides the citizens and visitors to the City with almost unlimited opportunities for swimming, bathing, and boating. The names of 'Long Bridges', 'Tumbling Bay', and 'The Cherwell' bring to mind all forms of pleasant recollections and associations. The bathing-places are in the open river, but it is thought that provision should be made for under-cover baths in order that swimming and bathing may be continued throughout the year and not confined to the summer season. The City Council is developing plans for such accommodation at the present time. The bathing-places in the open river are free to all users. Quite appropriately, under the local conditions, swimming and life-saving clubs have sprung up and are flourishing among the adult portion of the population. Swimming is regularly taught in the whole of the schools under the control of the L.E.A., and the percentage of children who hold certificates for ability to swim and dive is exceedingly high. The Oxford City Police are very prominent in this particular direction, and annually hold a Gala which attracts a large concourse of spectators. The schools also have their swimming competitions.

Neptune R.C., Falcon R.C., and Hannington R.C. are popular and prosperous clubs which cater for the aquatically minded portion of the citizens.

For those who play Golf (and the numbers are rapidly increasing) there is satisfactory provision. In North Oxford the club has recently moved to partly new quarters, and the course has been much improved thereby. The course is less than three miles from the centre of the City and the fees are exceedingly moderate.

At Southfield, in the Cowley area of the City, is the City and University course. This is a more strenuous course, and is therefore better suited to the needs of the University men who hope to become representatives against Cambridge. The

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course is exceedingly well kept. The Frilford course is generally conceded to be the finest in this locality. It certainly penalizes the player who cannot play a straight ball. It is common land in character and has gorse as hazards in many places. It is within seven miles of the City, and is easily accessible by car. Day and week members are admitted.

The game of Bowls, though ancient, maintains its popularity, and in recent years the number of its adherents has grown immensely. Both men and women fall victims to its allurements. Oxford is particularly well furnished with greens of first-class quality. Possibly the greens of the 'City and County Club' are second to none in this section of the country, and most certainly the standard of play attained by the members is exceedingly high. Bowling-greens are also found in the south, east, and west of the City.

THE UNIVERSITY

By W. T. S. STALLYBRASS, D.C.L.

THE twofold system of College and University governs the organization of many sports as it does of many studies in Oxford. For all the major games there are college teams that feed the team which represents the University as a whole; and inter-college rivalry is scarcely less great than the ambition to defeat the sister University of Cambridge. For Oxford does not compete at most games with any other English University. In most sports Oxford and Cambridge have placed themselves upon a pinnacle from which there is at present little prospect that they will have to descend. London and the modern Universities cannot yet hope to compete with the older Universities on equal terms and, if they play at Oxford at all, probably play against one or other of the colleges.

A man ceases to be eligible to represent the University of Cambridge or his college against another after four years (in the case of the Boat Race, five years) have elapsed since the date of his matriculation.

Men who represent the University against Cambridge in the more important events are said to have obtained their 'blue', that is, the right to wear the dark-blue colours as distinct from the light blue, which is the Cambridge colour. No one is a 'blue' unless he has actually represented Oxford against Cambridge. If a man has been chosen to play and is prevented by illness he is not a 'blue'; if a team has been chosen and then the match is not played, the team have not got their 'blues'. A reserve has often got his 'blue' whilst the man for whom he is acting as a substitute has been deprived of it by illness. When the captain 'gives a man his blue', it merely means that he has invited him to play against Cambridge; if he, for any reason, cannot play the gift is null and void.

A 'blue' is not awarded to the representatives of the University in all games. In the most important games the representatives obtain a 'full blue', that is, the right to wear the unmixed dark-blue colours. In the games which are recognized as important, but of secondary importance, a 'half-blue' is awarded; that is, the right to wear dark-blue and white striped colours. To other games no recognition at all is given.

The decision as to the award of a 'blue' or a 'half-blue' rests with a committee known as the 'Blues' Committee'. The 'Blues' Committee consists of the Captain (or President), the Secretary, and the senior Treasurer of the University Boat, Cricket, Rugby Football, Athletic, Association Football, Hockey, and Lawn Tennis Clubs. The President of the University Boat Club is *ex officio* convener and President of the committee, which in making its decisions is guided by the number of men who play any particular game, and the consequent amount of competition there is for a place in the representative team, as well as by the intrinsic merits of the game itself.

In the colleges, too, a hierarchy of sport is recognized. The success of a college in the inter-collegiate cup competition for the 'full-blue' events is usually celebrated by the holding of a college supper. The college assembles in force in Hall to do honour to the occasion, and as a general rule

the Head of the College presides. These suppers have been the tradition for many years in connexion with success on the river. The Headship of the River in either Eights or Torpids, and the making of a number of bumps calculated on a scale carefully graduated in proportion to the importance of the race (e.g. Torpids are less important than Eights, and the second division than the first), have long been recognized as a ground for corporate rejoicing. Hence they have obtained the name of 'bump suppers'. But the winning of the Rugby Football Cup, the Association Football Cup, the Athletic Cup, and the Hockey Cup are usually marked by similar manifestations of licensed hilarity, and in modern Oxford the 'Cup supper' is as much a recognized event as the 'bump supper'.

Each college has its own ground and its own barge. The barges are at the present day stationary in their traditional places on the north bank of the Thames. They were originally craft discarded by the City Companies, but none of the original barges is now left. Until comparatively recent times the barges used to go to Henley for the Regatta if the college boat went there. The barges are fitted up in a comfortable manner for use while the rowing men are waiting to go out in the college boats, and for the practice of rowing exercises. The roofs are used for the purpose of watching the races on the river.

The college ground usually finds space for cricket pitches, one or two football and hockey fields, and a large number of lawn tennis courts.

Any account of sports in Oxford will naturally begin with an account of the 'full-blue' sports. Of these, three excite far more general interest at Oxford than the others—Rowing, Cricket, and Rugby football.

ROWING

The Boat Race, rowed annually against Cambridge, about the end of March between Putney and Mortlake over a course of four and a quarter miles, is one of the great



EIGHTS WEEK. A SCENE ON THE RIVER BETWEEN RACES, WITH COLLEGE

22 EIGHTS WEEK. A SCENE ON THE RIVER BETWEEN RACES, WITH COLLEGE
BARGES IN THE BACKGROUND

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English national festivals. It is watched by some half-million enthusiasts. To have rowed in this race is a highly prized distinction; the pleasures of its memory remain throughout life.

The most important college races are the Torpids and the Eights. The Torpids, rowed in the fifth week of the Hilary Term, are 'bumping races' between the colleges in eight-oared, clinker-built boats with sliding seats, and no one may row in them who rowed in his college first eight the previous summer (though this rule was not acted upon in 1935) or who rowed in the University Trial Eights. Each college starts in the position in which it finished the previous year, and attempts to bump the boat in front of it and to elude the pursuit of the boat behind over a course about one and a quarter miles in length. Each college can put on as many boats as it desires, and, for example, Brasenose II will start where Brasenose II left off the previous year.

The 'Summer Eights' are rowed in the fourth week of the Trinity Term. They also are bumping races, but in this case every member of the college in residence is eligible to row, provided he has not been in residence more than five years since Matriculation. To row in the Summer Eights is the summit of every rowing man's ambition as a member of the college, and to be Head of the River, that is, to finish the Eights in the first place and to hold the cup to which that position entitles, is probably the proudest achievement in the world of sport for an Oxford college. Those who do not shine or who are not filled with the competitive spirit can take out a boat on the Upper River near Port Meadow, and many a pleasant trip has been made on the upper reaches of the Thames, whilst the River Cherwell is filled in the Summer Term with punts.

CRICKET

The University cricket ground in the Parks is by many thought the finest of England's many fine cricket grounds. In late May and early June the carefully planted trees show

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a variety of shades of green that cannot be surpassed anywhere. A cricket 'blue' is undoubtedly the most difficult of all to win, for cricket is played at every English school and also at most schools in Scotland and Wales, and in South Africa, Australia, Canada, and the West Indies. No one can hope to represent the University at the game unless he has played before he comes to Oxford, though some develop late, and have played for Oxford and even England although they did not get into their school elevens.

When term is over the team, which has by now nearly become fixed, goes on tour, and plays four matches away from Oxford, for example, at the Oval, at Eastbourne, and at Lord's. Immediately after the tour, in the first or second week of July, the great match is played at Lord's against Cambridge. To it some 30,000 spectators annually make their way. Though less of a social and more of a cricketing function than it used to be, the 'Varsity' match at Lord's is still one of the prettiest and gayest of the events in London's social season. The University Cricket Club is not by the terms of its tenancy allowed to take a 'gate' in the Parks, and when the Australians (and sometimes other visitors) play in Oxford, in order that a 'gate' may be taken, the match is played on one of the college grounds. The Christ Church ground is the one usually borrowed, for the O.U.C.C. have their own wicket there, made from the turf taken from the old University ground at Cowley. University matches have also been played on New College and Magdalen grounds. The colleges play each other, and the stronger colleges also play matches against the public schools and the leading clubs, such as the Authentics, the Free Foresters, the Cryptics, and I Zingari.

FOOTBALL

The University Rugby Football Club (O.U.R.F.C.) own an excellent ground about one mile from the centre of the City on the Iffley Road. The University XV is usually one of the strongest in the country, and many of its members are

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chosen to play for England, Scotland, Wales, and Ireland, whilst still in residence. Large crowds of four or five thousand watch the matches, and as many as twelve thousand have witnessed a match against the All Blacks from New Zealand.

For the most part the Hilary Term is given over to the colleges which compete for an inter-collegiate cup, a competition instituted in 1912. The Rugby cup-ties excite more interest and enthusiasm than any other college sporting event of the year. The early rounds are played on the grounds of one or other of the competing colleges, but the semi-final and final rounds are played on the University ground at Iffley Road, and attract some two or three thousand spectators. No game enjoys a greater prestige at Oxford than Rugby football. The non-existence of professionals in this branch of sport results in the standard of the University XV being as high as any in the country, fed as it is by recruits from the great public schools, from South Africa and Australia, and from the Scottish Universities. Such is the enthusiasm for the game that all the colleges have second XV's, and even a third XV is not without precedent.

Association football is one of the oldest 'full-blue' sports. The O.U.A.F.C. (Oxford University Association Football Club) shares a ground on the Iffley Road with the O.U.A.C. (Oxford University Athletic Club). It there meets the strongest amateur sides, such as the Corinthians, and a certain number of professional elevens. The match with Cambridge is now usually held on the first Thursday after the Michaelmas Term. This used to be played at Queen's Club, then at the Crystal Palace. Now it is played on the ground of the Chelsea Football Club at Stamford Bridge. As in the case of Rugby football the Hilary Term is mainly devoted to college football. The College cup has a long history, having been played for every year (except the war years) since 1883. The final and semi-finals are played on the University ground. It would be idle to conceal the fact that Association football does not hold the place that it used to hold in the public estimation at the University. The

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high pitch of excellence to which professional players have brought the game makes the standard reached at the Universities appear low compared with that achieved at Rugby football. But a large number of men still play the game, as is evidenced by the fact that all the colleges place two elevens in the field. Each college has its own ground, but in many cases the same ground is used as for Rugby football, the posts being changed according to the game which is being played.

ATHLETICS

Athletics in the narrow sense of the term is another of the oldest 'full-blue' events. But it is not all the representatives of the University athletics who get full 'blues'. That is reserved for men who win their event in the Sports at Oxford, or who win their event against Cambridge. The other representatives merely get a 'half-blue'. Colleges have not got their own athletic grounds, and all the running and jumping at the University takes place on the O.U.A.C. track at Iffley Road, which surrounds the ground of the O.U.A.F.C. There is a coach who assists with advice and with the training of the team. Athletics still keep their hold on Oxford, and the track is crowded all the year round with Englishmen, and men from the Dominions anxious to win the distinction of representing Oxford against Cambridge.

HOCKEY

After a long struggle hockey was given its 'full blue' in 1926. For many years the number playing hockey in Oxford was large, but it was only played at a few of the more important public schools, and the standard reached was not high. Now all that is changed, and the standard of University hockey is very different from what it was twenty years ago. The O.U.H.C. (Oxford University Hockey Club) have a ground in the Parks, and play almost all their home matches there. Matches are played with all the chief clubs, and Cambridge are met at Beckenham in February. Each college has its own hockey

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ground, and there is an inter-college competition on the 'knock-out' principle held in the Hilary Term after the University match is over.

LAWN TENNIS

Lawn Tennis is the most recent event to secure the coveted 'full blue'. The O.U.L.T.C. (Oxford University Lawn Tennis Club) has a number of grass and hard courts by the side of the University Athletic Club track. Lawn Tennis is probably played by more members of the University than any other game, and the colleges all have a large number of grass courts, whilst most of them have a few hard courts as well. There is a cup competition in two divisions, which is held annually on the 'knock-out' system—some colleges entering two teams.

OTHER SPORTS

There is provision for every form of sport, the details of which there is no space to set out here—for Boxing, Fencing, Lacrosse, Rackets, Squash Rackets, Fives, Polo, Water Polo and Swimming, but now members of the University have to go to London if they wish to play Ice-Hockey. There are two packs of Beagles, and Draghounds. There is a Rifle Club and a Yacht Club, whilst there is also a University Air Squadron, membership of which is a much-prized privilege.

THE NATURAL HISTORY OF THE OXFORD DISTRICT

THE FLORA

By M. W. OVEREND, B.A.

THE area here described embraces a district for about five miles round Oxford, and includes varied plant life from the

Shadows brown that Sylvan loves
Of pine or monumental oak

of Tubney and Bagley Woods to the Thames and Cherwell with their 'pioned and twilled brims'. The City of Oxford is situated mainly on a tongue of land between the Thames and the Cherwell, the soil being mainly a stratum of varying thickness of river-gravel deposits resting on an uneven bed of Oxford clay of very considerable depth. It is rich in College Gardens, so ably described by Dr. Gunther in his book. Among them is St. John's with its magnificent lawn and varied rock garden; Worcester possesses a picturesque lake; the famous Addison's Walk curls round Magdalen's fritillary-haunted meadow.

The oldest Botanic Garden in Britain (founded in 1621) spreads its green shade through a Caroline gateway almost opposite to Magdalen College. Behind it Christ Church Meadows with Alders, Elms, Planes, and many other fine trees stretch between meandering Cherwell and the Isis.

Linnaeus, the great Swedish Botanist, visited Oxford, and Dillenius, Professor of Botany in Oxford during part of the eighteenth century, offered him half his salary if he would stay and work with him in Oxford.

The Thames is a slow-flowing river with a gradient of eighteen inches a mile and possesses a varied aquatic and paludal flora which flourishes in spite of the industry of the Thames Conservancy dredgings, and provides in the quiet tributaries a rich profusion such as would delight the heart

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of any botanist. The main stream, 186 feet above sea-level at Oxford, passes Godstow, Port Meadow, Fiddlers' Island and Osney Lock, through the City and Folly Bridge to Iffley and Sandford. In the adjacent meadows the Checkered Lily or Snakeshead (*Fritillaria meleagris*) is well established and may claim indigenity, though it was unnoticed by Gerard and Dillenius. The Sweet Flag (*Acorus calamus*) lines the banks in many places and flowers but never fruits, spreading entirely vegetatively. Water Dropwort (*Oenanthe fluviatilis*) with its white umbels is often found. The Canadian Water Weed (*Elodea*) made its appearance in 1854, since when it has spread too rapidly. There are various species of pond weeds, notably *Potamogeton mucronatus*, *lucens*, *perfoliatus*, and *pectinatus*. Mares Tail (*Hippuris vulgaris*) is frequent at Binsey and grows to some eight feet in length in the lake at Blenheim. Water Milfoil (*Myriophyllum verticillatum* and *spicatum*) are common. The Arrowheads (*Sagittaria*) raise their pointed leaves and flower freely. Bulrush, Flowering Rush, and other commoner rushes line the banks in parts, and the massive leaves of the great Water Dock (*Rumex hydrolapathum*) give solidarity. Various species of Duckweed (*Lemna*) cover the water of ditches and sluggish streams later on in the year. The Water Plantain (*Alisma*), one of the most beautiful of our water plants, is also found. On the sides are grasses such as *Glyceria aquatica*; Great Hairy Willow Herb (*Ephilobium hirsutum*), Purple Loosstrife (*Lythrum salicaria*), Skulcap (*Scutellaria galericulata*), Water Forget-me-not (*Mysotis palustris*), Water Avens (*Geum rivale*), and Yellow Loosstrife (*Lysimachia vulgaris*) grow freely in contrasting colours. The White and Yellow Water Lilies are found in all parts where the current flows sluggishly: Water Violet (*Hottonia*) abounds. Early Purple Orchis (*Orchis mascula*) is often found in marshy meadows; Marsh Orchis (*Orchis incarnata*), Pyramidal Orchis (*Orchis pyramidalis*), and Bee Orchis (*Ophrys apifera*) are fairly common.

There are varied and lovely woods all round, Bagley Wood being the most extensive. This is now the head-quarters of

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the Forestry School Experiments which have altered its original condition. It is mainly on Kimeridge Clay, capped by Plateau drift sands and gravel, and possesses, in common with Boars Hill, a rich bramble flora. Here also are found among others the beautiful Bellflower (*Cervicina hederacea*), Small-flowered Buttercup (*Ranunculus parviflorus*), Columbine (*Aquilegia vulgaris*), Rose-bay Willow Herb (*Ephilobium angustifolium*), Foxglove (*Digitalis*), and Hellebore (*Helleborine latifolia*). In an adjoining wood trees of Pear (*Pyrus communis*) also occur.

There is a Nursery which has bred and experimented on many now stately conifers, and many deciduous trees scattered and growing together, for example, a Sycamore Coppice over Bluebells, and an Alder Coppice over Bracken.

Wytham Wood to the north-west of Oxford is on rising ground (200 feet on the Oxford Clay) and 538 feet on the Corallian ridge at its summit. This gives it a varied ground flora: occasional plants of Viper's Bugloss are found near the top. Herb Paris (*Paris quadrifolia*) is found in the lower reaches.

Tubney has dark pine woods among others. Stow Wood consists chiefly of Oak and Hazel. Hen Wood has numerous Silver Birches and some gorse and heather. There are Beech Woods at Wood Eaton, and more Oak at Elsfield. The Underwood is particularly varied and formed of Hawthorn, Mountain Ash, Spindle Tree (in abundance at Wytham), Blackthorn, Crab Apple, Birch, Holly, Elder, Wayfaring Tree, Guelder Rose, Dogwood, Sallow, Buckthorn. It is interesting to note that a good many of these shrubs were planted some years ago on the island between the Isis and the Cherwell, and have now attained an almost arboreal size.

The Hedgerows are not the least interesting part of the Botany of the District. Formed of Hawthorn, Oak, Ash, Willow, Elm, Hazel, and Sallow, with Dog Rose, Bittersweet, Honeysuckle, Black and White Bryony and Vetch clambering over them, they make a feast of scent and colour. Underneath are varied grasses and the usual hedgerow plants, for example, Bedstraw (*Galium*), Wild Beaked Parsley

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(*Anthiscus sylvestris*), Red Campion (*Lychnis dioica*), Herb Robert (*Geranium robertianum*), Hedge Woundwort (*Stachys sylvatica*), Stitchwort (*Stellaria holostea*), and Ground Ivy (*Nepeta hederacea*).

The mural vegetation, a characteristic of Oxford and District, must not be left out. Cardinal Newman noticed on the walls of Trinity College the Snapdragon (*Antirrhinum majus*) as an 'emblem of his own perpetual residence unto death in my University'. The showy Golden Oxford Ragwort flourishes bravely everywhere, the ferns Wall Rue (*Asplenium ruta-muraria*), and Common Spleenwort (*Trichomanes*) are still to be found. The Ivy-leaved Toad Flax (*Linaria cymbalaria*) veils with a mauve and green mist the greyness of the college walls, among them Wadham and St. Hilda's. It is interesting to note that this is the plant that Linnaeus used when he visited Oxford to demonstrate his wonderful system to Dillenius.

Finally, the landmarks of the Old World Yew at Iffley and the stag-headed Oak which Matthew Arnold mistook for an elm 'that single elm-tree bright against the West' seem to belong to time immemorial.

(The author is indebted to the work of Dr. Church and the late Dr. Claridge Druce)

THE WILD MAMMALS

By D. H. S. DAVIS, B.A.

THE majority of the commoner British mammals occur within a few miles of Oxford. The country round offers a wide variety of habitats and includes woodland (both deciduous and coniferous), grass-covered hill-tops with and without scrub, low-lying pasture and arable land devoted mainly to agriculture, and considerable stretches of river and streams.

The largest animals are amongst the carnivores; these are the fox (*Vulpes vulpes*), the badger (*Meles meles*), and the otter (*Lutra lutra*). There are a number of badger earths, a notable one being at Stadhampton, near Cowley. Foxes are not uncommon everywhere, especially in the spinneys and woods which surround the outskirts of the city, such as



(Photograph by the Imperial Forestry Institute)
Oxford Ragwort
(*Senecio squalidus*)



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Wytham Wood, Bagley Wood, Shotover Hill, and in the Beckley district. The otter occurs in the tributaries, at least, of the Thames, the River Thame being a noteworthy example. Stoats (*Mustela erminea*) and weasels (*M. nivalis*) are widely distributed, particularly on estates and in the neighbourhood of rabbit warrens. The rodents, which form an important source of food for some of the above-mentioned animals, fall into three groups: rabbits and hares; squirrels; and mice, rats, and voles. There are extensive rabbit (*Oryctolagus cuniculus*) warrens on the higher ground in such regions as Cumnor Hill, Shotover Hill, and Wytham Wood. The brown hare (*Lepus europaeus*) is frequently met with in any of the pasture or hill country. Both the red squirrel (*Sciurus vulgaris*) and the grey squirrel (*S. carolinensis*) occur, although the latter is by far the most numerous. There are said to be a few red squirrels in Wytham Wood. The grey squirrel may be found almost anywhere in deciduous woods, a type characteristic of open parkland. There are a few in the University Parks and in one or two of the college gardens.

Of mice and voles there are four species, if the house mouse (*Mus musculus*) is omitted. The wood or long-tailed field-mouse (*Apodemus sylvaticus*) is confined mainly to woodland although it does occur in the open, but always in the vicinity of trees. The red-backed or bank vole (*Clethrionomys glareolus*) is more associated with the edges of woods. The short-tailed vole (*Microtus hirtus*) lives entirely in the open rough grassland or at the edge of grazed fields where there is sufficient grass cover. It seems that the three species, where their habitats overlap, use the same run systems. Bagley Wood is a place where all three species are known to occur together; the wood mice amongst the trees, the bank voles at the edges of plantations and in the more open parts of the wood, and the short-tailed vole on the few remaining stretches of grass. The wood mouse, however, is here by far the most numerous, relative to the other two. There seem to be no harvest mice (*Micromys minutus*) or dormice (*Muscardinus avellanarius*). The fourth species is the water vole (*Arvicola*

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amphibius). This animal is one which is very often seen, both on the Cherwell and the Thames, especially in the upper reaches. They are attractive animals to watch and they go about their business with a considerable measure of disregard for one's presence.

The other small mammals are the insectivores; the mole (*Talpa europaea*), the hedgehog (*Erinaceus europaeus*), and the shrews. The activities of moles are one of the characteristic features of many pasture fields and open grassland. They rarely occur on arable or stubble. On Port Meadow a census carried out last year showed that there were eighteen individuals to the acre. Hedgehogs are frequently discovered at night feeding in the open fields, during the warmer months of the year. As many as nine in one evening were seen in one large field to the north of Oxford last August. Their nests, which are made of dry grass, leaves, and sticks according to the material available, are more commonly found in the winter or summer than in the spring before they have started breeding. At this time they seem to do without or make only a temporary one for a day or two. The shrews, of which there are three mainland species in Britain, the common shrew (*Sorex araneus*), the pigmy shrew (*S. minutus*), and the water shrew (*Neomys fodiens*), probably all occur in the district. The common and pigmy shrews seem to be restricted to no particular type of habitat and are found equally commonly in woods and fields. The water shrew is probably present in such a region as Otmoor, or in the water meadows near the rivers. There is only definite evidence of one species of bat, the pipistrelle (*Pipistrellus pipistrellus*), near Oxford. This is commonly seen both in the City and in the surrounding country.

BIRD LIFE

By W. B. ALEXANDER, M.A.

ALMOST fifty years ago (the preface to the first edition is dated 24 April 1886) appeared a little book entitled *A Year with the Birds—By an Oxford Tutor*. Before the end of that year

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a second edition was called for and its author, W. Warde-Fowler, signed his name to a prefatory note. The first two chapters deal with the birds to be seen about Oxford, and an appendix gives a 'List of Birds observed in Oxford, and within a radius of about four miles, during the last three years'. In his preface Warde-Fowler wrote: 'I have purposely confined myself to the city and its precincts, in order to show how rich in bird-life an English town may be', and in the first chapter he remarks that 'Oxford is almost a Paradise of birds'. He went on to point out some of the reasons for this, the fact that the City is built at the junction of the Isis and the Cherwell so that water is everywhere, the numerous quiet college gardens near the centre of the town, and the more extensive open spaces of Christ Church Meadow, Magdalen Park, and the University Parks. He found 'the only adverse element in the gradual but steady extension of building to the north, south, and west'. In the succeeding half-century, and especially in the last decade, this extension of the City has proceeded with ever-increasing acceleration, but on the whole the effects on bird-life have been slight. Perhaps the most noticeable sign of the recent conversion of the University city into an industrial town is the abandonment of the rookeries in Balliol Quadrangle, Christ Church Meadow, and the University Parks, all of which have been deserted within the past seven years. The only two rookeries still remaining in the town are those in Magdalen Park and Osney churchyard, the rest of Oxford's rook population having moved to the outer suburbs. As in London, Birmingham, and other large cities the place of the Rook is being partially filled by the Carrion Crow, which finds in the trees in parks and gardens nesting-places unvisited by the keeper with a gun. In Oxford, as in London, the Wood Pigeon has found security in the city, and builds in the trees in the streets, gardens, and parks as well as on some of the buildings. Its smaller relative, the Stock Dove, also nests on some of the university and college buildings, and Oxford is perhaps the only town in England where this species breeds. Though

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both kinds of pigeon were already in occupation fifty years ago, neither has become so tame as has the Wood Pigeon in the London parks.

In general it may be said that the City of Oxford and its immediate neighbourhood are inhabited by almost all the typical birds of the woods, gardens, and fields of southern England. Its most interesting species are perhaps those which frequent the trees along the Cherwell, where Tree Sparrows and Redstarts breed in the pollard willows and Siskins and Lesser Redpolls frequent the alders in winter, a few pairs of Redpolls remaining to breed in the Parks. Warde-Fowler's list shows that little change in the avifauna has occurred in the past fifty years. The Redstart and Corn Crake have become increasingly scarce and the Wryneck has disappeared, but these birds have greatly decreased in numbers everywhere in the south of England. On the other hand, the Redshank and Snipe now breed in meadows near the rivers, where the former was unknown fifty years ago and the latter only a winter visitor. The Hawfinch was not included in Warde-Fowler's list and is now not very uncommon, though rarely seen owing to its retiring habits, and possibly overlooked by him. The Willow Tit, which had not been distinguished from the Marsh Tit fifty years ago, is found about Oxford in small numbers; and the introduced Little Owl has become common.

So far, we have been speaking of the birds resident throughout the year, or regular visitors in summer or winter, which number about ninety species. But in addition to the birds which are always with us at the appropriate seasons, individuals of many other species pass through the district more or less regularly on migration in spring and autumn, and a certain number of them break their journey for longer or shorter periods. The great expanse of wet grassland between North Oxford and the river, known as Port Meadow, is specially attractive to migrants. Oxford bird-lovers who visit it frequently at these seasons may hope to be rewarded by the sight of wading birds of various species, feeding on the patches of muddy ground on the river-bank, or of terns or

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gulls flying over the river. The long list of birds of these groups which have been observed (or in former days shot) there comprises a considerable proportion of all those on the British list. At all times of the year Herons from the heronry in Wytham Park across the river may be seen on Port Meadow or in the neighbouring fields. Numerous Lapwings breed there and in winter are joined by flocks of their own species and of Golden Plover. In times of flood, when part of the Meadow is covered by a sheet of shallow water, ducks of various kinds are attracted, and in periods of storm or of severe weather various species of sea birds, divers, and grebes have appeared, as well as wild geese and swans. Since Port Meadow is within the boundaries of the City it is probable that few inland towns could show so long a list as Oxford of birds which have been observed within its limits.

The chief lack of Oxford from an ornithological view-point is the absence of any large lake or reservoir in the immediate vicinity. Fortunately for bird-lovers the lake in Blenheim Park is easily accessible. Here Coots, Grebes, and several species of duck breed regularly, and other kinds of duck may be seen in winter.

Since the time of Warde-Fowler there have always been lovers of birds among the residents of Oxford and members of the University. In recent years the Oxford Ornithological Society has helped to put them in touch with one another and with other bird-lovers in the counties of Oxon., Berks., and Bucks. The Society publishes annually a report on the birds of these three counties and has also carried out surveys of the distribution, within its area, of some of the more local species, and censuses of the numbers of breeding pairs of Herons, Great Crested Grebes, Redshanks, Snipe, Kingfishers, Rooks, and House-Martins over a part or the whole of its area. Censuses have also been made of all the birds present on certain areas of farmland and woodland in summer and in winter over a series of years, so that the density of the bird population round Oxford and the relative proportions in which the species occur in this district is undoubtedly

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more accurately known than in any other part of the British Isles.

Members of the Society have also for a number of years marked birds by placing aluminium rings on the legs of nestlings or of adults captured in winter. We have thus learnt that many of the Starlings which feed in Oxford parks and gardens in winter breed in the countries round the Baltic—Finland, Lithuania, Poland, and East Prussia—that Lapwings reared in the surrounding fields sometimes winter in Spain, and Linnets in south-western France.

Undergraduates who have helped in this field-work of the Ornithological Society during their residence in Oxford have in many cases carried on similar work afterwards in various parts of the British Isles and abroad, and it is hoped shortly, if sufficient funds can be secured, to establish a permanent Institute of Ornithology at Oxford, controlled by the University, to co-ordinate and direct field studies of birds throughout the British Isles, and to supply information or advice to any one concerned with the study of living birds or their protection.

THE INSECTS

By RUSSELL BRETHERTON, M.A.

STUDENTS of insect life who live in Oxford have reason to be thankful for their surroundings. The majority of insects are extremely local in their habits; they are attached to particular tracts of country by the need to be near the food-plants of their larvae, or by the need for shelter from wind and frost, or by their inability to spread, for geographical reasons, from their places of original settlement. If one wishes to observe the habits of any great number of species, one must live in a centre round which the country is as varied as possible, and which is not sharply cut off from other regions by barriers of sea or wind-swept hills. Oxford fulfils these conditions admirably.

In the City itself there are artificial attractions for the students of insects. The collections in the Hope Museum,

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of local, British, and foreign insects, are second in Britain only to those of South Kensington; and for nearly fifty years Oxford has been a great centre of scientific Entomology. And the City has attracted living insects as well as dead; for the great abundance of introduced trees and plants in the University Parks and in suburban gardens has brought to the district quite a number of species of smaller insects, especially Micro-Lepidoptera, which are not indigenous to it. On the immediate outskirts of the town, the meadows and streams of the Thames and Cherwell are a splendid haunt for water-loving insects of all kinds; the most casual observer must be struck especially by the number and variety of the Dragon-flies (*Paraneuroptera*) and the May-flies; and for the expert beetle-hunter the rivers and their surroundings are an especially rich field for investigation. Rather farther afield Oxford is surrounded on all sides by diversified pastoral and woodland country, with considerable variations of soil and altitude; and it is approached from the south, west, and north by sheltered valleys which have been natural channels of insect migration. On the eastern side, the hilly ground about Shotover is clad with broken woodland and bracken and gorse-covered heaths, which are rich in butterflies. More to the north, where the soil is full of lime, there are isolated stations of the Chalk Hill Blue butterfly (*Agriades corydon*) and other limestone insects not found elsewhere in the district. Farther to the east, beyond Stanton St. John, there is a remote region of marshy fields and dense woods of oak, ash, and thorn—the old Forest of Bernwood—which is of all parts of the district perhaps the richest in scarce insects, especially Lepidoptera. On the west, there is almost equal variety. The three large stretches of wood at Bagley, Tubney, and Wytham—on clay, sand, and oolite respectively—provide an extremely wide selection of insects. At Cothill a tract of wood and peat-bog has come into the possession of the University as the Ruskin Natural History Reserve, in its original and undeveloped state; it is of particular interest to the Coleopterist, and to the Lepidopterist as the haunt of many

of the scarcer Wainscot Moths and other reed-loving species. The summit of the high ridge of Boars Hill is largely of sandy soil, and provides a home for a few of the insects which are lovers of fir-trees and of heather; and the deeply cut coombes on the eastern slopes give shelter to a great variety of beetles and Micro-Lepidoptera. Finally, outside the Oxford district proper, but within easy reach by road, there are the chalk slopes and beech woods of the Chiltern Hills and the Berkshire Downs, with their own abundant and peculiar insect life. Insects which frequent the sea-coast, mountains, and moorlands are not, of course, often found near Oxford; but quite a number of species both of moths and of beetles which in Britain are usually confined to the sea-coast, occur in the sandy heath country about Tubney and Frilford.

To the ordinary observer the butterflies and moths are the most conspicuous and interesting of the Oxford insects, apart, perhaps, from the Dragon-flies and May-flies and other more uncomfortable biting insects by the streams. Forty-six out of the sixty-eight British butterflies have been observed in recent times within ten miles of Oxford; and the list can be lengthened if the more distant Chilterns and Berkshire Downs are included. Of the forty-six, forty-two appear to be resident, though some of them, such as the Large Tortoise-shell (*Eugonia polychloros*), the Wood Argus (*Pararge egeria*), and the Little Blue (*Zeuzera minima*) are usually very scarce. The woodland species are perhaps the most fully represented. The White Admiral (*Limenitis sibylla*) is not uncommon at Bagley and in Bernwood; all five species of British Hair-streaks are to be found in one small wood; and even the Purple Emperor (*Apatura iris*) is not infrequently seen, though more seldom caught. Among the moths all the resident British Hawk Moths (*Sphingidae*) are found, some of them, such as the Small Elephant Hawk (*Chaerocampa porcellos*) and the Broad-bordered Bee Hawk (*Hemaris fuciformis*), quite commonly; and so are most of the Prominent and the Footmen. 'Sugaring' for moths at night is extremely productive throughout the summer; not only can an unusually

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wide range of species be seen, but they often include such rarities as the Figure of Eighty (*Palimsestis octogesima*), the Dotted Rustic (*Agrotis simulans*), the Heart Moth (*Dicyclia Oo*), and the Light Crimson Underwing (*Catocala promissa*). The *Geometrinae* are very well represented, and some of the scarcer ones come occasionally to lights in the City of Oxford itself. Of the Micro-Lepidoptera, about 740 out of the British total of 1,325, have been recorded from the District; but the discovery of many of these of course requires close search.

THE NEIGHBOURHOOD OF OXFORD

By GEORGE WRIGHT

THE stranger who arrives in Oxford, without having recently consulted a map, may imagine that he is in the centre of a district called Oxfordshire; and then, if he takes a walk across Folly Bridge, he may be surprised when he finds that he is in Berkshire; for many of the citizens of Oxford are Berkshire men, not Oxfordshire men. The neighbourhood of Oxford consists therefore of two counties, not one—or, at any rate, parts of two counties. This district may be described as the Thames Valley from Lechlade to Pangbourne; for, although the eastern boundary of Oxfordshire stretches along the Thames to Henley, and Berkshire follows its course as far as Windsor, no Oxonian would wish to include Reading in the natural kingdom of which Oxford is the centre. He would hesitate, too, about Banbury and Thame; the former because, in its Puritan mood, it substituted ‘cakes and zeal’ for ‘cakes and ale’; and the latter for a similar reason—it produced John Hampden.

This kingdom, of which Oxford is the market-town and rural metropolis, has certain clear characteristics of its own, and has its own well-marked natural boundaries. The Thames itself runs through the centre of it, from west to east, draining and irrigating a tract of dark and fertile loam. Northwards and southwards from the river, and westwards towards its source, the land rises through red soil and clay to chalk uplands. Corn land gives place to sheep pasturage. Hard-wood trees grow fewer, and pine and fir predominate. This change of soil may be noticed as you pass along the roads out of Oxford, whether southwards to the Berkshire Downs, north or west to the Cotswolds, or eastwards to the Chilterns.

In the course of a few miles you may pass through a variety of crops, which will serve as an epitome of English agriculture; and through changes of scene which will repre-

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sent the many moods of the English landscape. In the river-valley you will find dense hedgerows round the fields, and cottages roofed with thatch; but, as you climb the chalk hills, larger fields will appear, enclosed with stone walls, and cottages roofed with tiles of Cotswold stone.

This change of scene may induce in the student of History a feeling that he is travelling backwards in time as he moves outwards from Oxford. He will notice first the country houses, parks, and spacious farm-buildings of the squirearchy, which in the eighteenth century made English agriculture the foremost in the world; and later, as he climbs the Cotswolds, he will pass into the sixteenth century—into the days of 'The Golden Fleece', when the English sheep-farmers and wool-merchants laid the foundations of English commercial prosperity and built for themselves the fine stone manor-houses and farm-buildings which are the peak of English domestic architecture. Farther on the imaginative beholder may find it easy to conjure up a still more distant time; for the high places—at once the holy places and the strong places—are the earliest haunts of men. He may stand amid the circle of stones at Great Rollright, a few miles beyond Chipping Norton, and dream of a time when Oxford did not exist; when the roads and track-ways skirted the complicated water-ways and treacherous marsh-land surrounding the junction of the Thames and the Cherwell. He may tread the Fosse Way and Akeman Street which converge upon Cirencester from the east, or walk along the Icknield Way and the Portway which traverse the south of this region, passing through Wantage; and there he may move among the remnants of a culture which was almost forgotten before Oxford was born.

Perhaps the best route along which to follow out this pilgrimage in time is the road from Oxford to Wantage and thence along the Vale of the White Horse. Going westward from Oxford, preferably towards evening, you climb Cumnor Hill and follow the road to Faringdon. The Thames lies below you on your right, as you wind along through a

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twisted avenue of luxuriant trees—elm and chestnut and beech, with a sprinkling of fir and pine. In summer-time a drowsy contentment broods over the road—in the heavy shadows of the trees and in the murmur of lazy winds. The road turns left toward Wantage, and the landscape changes. The corn-fields lie open to the wind and sun; and their broad expanse seems to resolve itself easily into the old open-field system of the Middle Ages. The air is keener here; and from time to time a tree bracing itself against the prevailing wind suggests that autumn may be boisterous in these parts. You enter Wantage, a narrow road leading you into a broad market-place. In the centre stands a statue of Alfred, who was born there.

It may occur to you that, if Alfred was not born there, he ought to have been; for the whole spirit of the place is Saxon, without any admixture of Danish, or Celt, or Norman. A similar spirit hangs about the market-places at Wallingford and of Newbury, though to a less degree. Other towns in the Oxford region, such as Thame and Chipping Norton and Burford, have a broad main street in which a market may be held; yet the street is a thoroughfare, and it beckons you on. But it is different at Wantage. The market-place is the goal, the centre of the communal life of the district, the meeting-place of the folk; and the roads lead in and out and not through. Your way lies westward along an ancient road which twists and turns around the projecting contours of the Downs upon your left, or falls and rises sharply from the deep and sudden combes that run up from the valley below.

There is not in England a road which is gayer in sunshine or more grim and forbidding in treacherous weather. It has an atmosphere of its own which baffles analysis, just as the distances on either hand baffle your attempts at measurement: on the left, because of the smoothness and changing gradients of the Downs, and on your right because the broad, flat vale below is muffled with trees. There is a positive spirit of fertility pregnant beneath the soil. The slopes are devoid

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of trees; but where the road dips down into a combe, trees spring up luxuriously from the drifted loam, so that you pass into 'a tunnel of green gloom'.

On your way you traverse the strangest cross-roads in England; two roads intersecting in a deep hollow, as though trying to hide their meeting-place from the world.

Above you, out of sight on the uplands, you have a silent companion, keeping a parallel course: the Ridgeway, perhaps the oldest road in England. It runs across White Horse Hill, while you approach it from below, having passed 'Alfred's Blowing Stone' and 'The Seven Barrows'. You stand on the high, bare shoulder of the hill and look out, backwards and forwards, across England. At your feet stretches out the Great White Horse. You are near the site of Uffington Castle, an earthen rampart 200 yards in diameter. Farther westward is the Cave of Wayland the Smith. Perhaps a member of your party will tell you of the traditions that haunt the neighbourhood: of Alfred's victory over the Danes, commemorated by the carving of the White Horse: of the strange elvish smith who lived nearby, and forged a sword for Merlin. And then perhaps another member of the party will disprove all this; but he will have no explanation to put in its place. The mystery will merely be deepened. He will merely turn the Saxon White Horse into a British White Horse, and then trace his genealogy back to Alexander's Bucephalus; and he will follow Wayland the Smith back to the doorways of a Scandinavian Valhalla. There are many mysteries in English history, and many places which call up thoughts too deep for words; and among these must be included White Horse Hill—where your young men may see visions, and your old men may dream dreams.

Your itinerary continues westward for a couple of miles and then turns north to Lechlade, and brings you back to Oxford through Faringdon and over Cumnor.

'But why all this talk of History?' the sight-seer may ask. The answer is simple—as paradoxes go; but it is none the less a paradox. England is not a geographical expression

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or an administrative unit; it is a growth, a history. Similarly with the English countryside; it is a picture, in the sense of being a visual delight; but it is at the same time a story. And just as the character of a grown man may be read in the lines round his eyes, so may the face of England be studied—in ‘the furrows of corn and the brown loads of hay’. And its beauty is the beauty of the life which it has lived with the men and women who have cherished it; for, again in the words of John Drinkwater, ‘When beauty and peace possess us, they are none, But as they touch the beauty and peace of men’.

What then is the peculiar characteristic of this region—the neighbourhood of Oxford? It can speak of England!

But then, so can other parts of England. Yes! but none with so clear an articulation. And the reason is simple. The men of Oxford have been its mouthpiece; and they have given it a clearer speech than has been given to any other part of England.

Not only have they sung of it, and talked of it, and written about it; but they have expressed it in other ways. Its character is implicit in the statesmanship of Peel, and in Burton’s *Anatomy of Melancholy*, no less than it is explicit in the poetry of Matthew Arnold, and Robert Bridges and John Masefield.

It is a country of many moods; and these men have discovered them and will act as your guides. They will fit a scene to your mood and a phrase to your thought. Matthew Arnold has called Oxford an ‘Adorable dreamer, whose heart has been so romantic’. If then you are in the romantic mood, take him for your guide. He will lead you with ‘his Oxford scholar poor’, over ‘the warm, green-muffled Cumnor Hills’ to muse there in the churchyard on the story of Amy Robsart; from thence down to ‘the stripling Thames at Bab-lock-hithe’, past ‘The Fyfield Elm’, heading for the ‘distant Wychwood bowers’.

Your road will lead you across the Thames at Newbridge: an old hump-backed, stone bridge, one of the oldest in the

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neighbourhood, which spans the junction of the Thames and the Windrush—a lovely name, matched by the title of the inn close by, 'The Rose Revived'.

On you go to Witney; and there romance preserves itself bravely despite the demands of modern industry and commerce. There is a vigorous communal life in the town; and on festive occasions the Witney folk can conduct a torch-light procession gleefully but with sobriety. They send the fire-brigade along, for safety's sake.

You continue to Burford, whose beauty may be equalled but cannot be surpassed. It is not often that the mind of man conspires so intimately with nature to produce loveliness. 'Life was lived nobly here to give this body birth.'

And now you head for Wychwood, passing Shipton and coming within sight of Charlbury. But you turn off southwards toward Leafield, passing through the fringe of the royal forest which formerly stretched from here to Woodstock, the hunting-ground of kings. You may preserve Mathew Arnold's mood at Woodstock, which was for six hundred years a royal residence. But in the great park you must turn your back upon the ducal mansion, for Marlborough's stark and mercenary realism strikes an alien note. Recall instead the story of Fair Rosamond, whom King Henry 'so dearly loved'. Here she came, from the shadow of the Black Mountains, to have delight and endure contumely; to be insulted after her death by the Bishop of Lincoln; but to have her bones tended as precious relics by the sisterhood of the nunnery of Godstow. Its ruins lie a mile away from the main road as you return to Oxford, at a spot which gives further proof of the sisterhood's appreciation of terrestrial loveliness. Southey praised Godstow, though he had little else but blame for Oxford. 'All I learnt', he said, 'was a little swimming and a little boating'; but he remembered 'walking over the ruins of Godstow nunnery with sensations such as the site of Troy or Carthage would inspire'.

On the other hand, your mood may be more sardonic. If

so, there are other guides: Gibbon, who asserted, 'To the University of Oxford I acknowledge no obligation': and Dr. Johnson also, if you believe Carlyle—which you should not—would come under this category. His poverty and his grim forthrightness shut him out from many of the amenities of University life; yet he said of it: 'There is at Oxford and Cambridge at least one very powerful incentive to learning, I mean the *Genius of the Place*'.

Or you may ride forth with Charles I, backwards and forwards across this region, which was his little kingdom in the years 1642-5. You may visit Edgehill on its northern boundary or Newbury on its southern frontier. You may march and countermarch across the Cotswolds toward Gloucester. You may ride with Rupert to Chalgrove, and follow the broken body of Hampden back to Thame. Or you may watch the phantom horsemen ride out to the fatal field of Naseby.

You may have other heroes. Perhaps you inherit the austere moral passion of Gladstone; in which case, you may rise, as he did, early in the morning and walk northwards for eight miles before breakfast, and then cover a further twenty-two miles before nightfall. Or you may wonder where 'Shelley dreamed his white Platonic dreams'. He was a lover of running water. Surely he must have sat upon the bridge at Clifton Hampden. Surely he must have known Pangbourne, where, in a deep valley cut through the chalk, there broods the essential spirit of the Thames.

Or, seeking the company of the saints, you may stand on Shotover Hill and recall how Wesley bluffed a highwayman into accepting thirty shillings, when actually he had thirty guineas in his pocket. Or you may go to Littlemore and move amid memories of Newman, who fought and grieved, and knew bitterness and despair and exaltation, as he sought for a deeper peace, which should surpass 'the mere human loveliness of Oxford'.

Or you may allow the parish churches of this region to tell its story; if so, you must travel backwards and forwards

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through highways and byways, to Abingdon and Wallingford and Dorchester and Burford and Fairford, stopping every few miles to hear a story told—simply in Early English, brusquely in Norman, or in a far-away whisper from Saxon times.

It is a country thronged with many voices from the past. You may choose your guide from amongst them; or it may be that they will choose you—according to your mood; in any case, I promise you that, to your joy or sorrow, you shall not find throughout this haunted region any spot, however quiet or remote, where you shall be ‘for one long, little moment with yourself, alone’.

CITY OF OXFORD MEDICAL SERVICES

By G. C. WILLIAMS, M.A., M.R.C.S., L.R.C.P., D.P.H.

PUBLIC SERVICES CONCERNED WITH THE HEALTH OF THE
CITY AND CONTROLLED BY THE CITY COUNCIL

THE following is a brief summary of the various Services
and the local arrangements for carrying them out:

1. Services dealing with environmental hygiene, the purity of air and water:

(a) The making and enforcement of building by-laws to
secure sufficiency of air space around a house, its sound con-
struction, and prevention of dampness.

(b) The construction of sewers and the disposal of sewage.

(c) Provision for the collection and disposal of refuse.

These services are administered by the City Engineer,
Town Hall, Oxford.

The Sewage Disposal Works are situated a few miles out
of Oxford.

2. The provision of a pure water supply.

The City of Oxford Water Works are situated at Swinford
on the main Oxford-Cheltenham road. Raw Thames water
is filtered and treated. The City Engineer is the Water
Engineer for the City.

3. Inspection of food prepared and sold in the district.

The inspection of food prepared and sold in the district
with power to seize and condemn unsound food. The taking
of samples of food and drink for analysis by the Public
Analyst and prosecution of those selling food not of the
nature, substance, and quality demanded.

This is administered by the Public Health Department,
Greyfriars, Paradise Street, Oxford.

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4. *The administration of the Housing Acts.*
The administration of the Housing Acts, including the power to build new houses, the duty to abolish slums, and to require the repair of houses where this is necessary. The building of new houses is undertaken by the City Engineer's Department, the repair of houses by the Public Health Department, and the control of the City Estates is in the hands of the City Estates Surveyor.
5. The control and inspection of Lodging Houses and Offensive Trades is supervised by the Public Health Department.
6. *Control and Treatment of the Acute Infectious Diseases.*
This includes notification of certain infectious diseases and investigation into the cause of outbreaks and their control. The provision of Isolation Hospital accommodation. The provision of antidotes against infectious diseases, i.e. diphtheria immunization, vaccination, &c. Free facilities for certain forms of bacteriological examination. Disinfection.
7. *The Medical Supervision, and, where necessary, treatment of Expectant, Parturient, and Nursing Mothers.*
Arrangements are made by the City Council, whereby Ante-natal and Post-natal Clinics are held weekly in different parts of the City. A woman doctor is in charge and doctors and midwives are encouraged to send their patients for examination.
The City also pays a grant to the Radcliffe Infirmary so that hospital provision is made for complicated cases in the Maternity Home.
8. *Infant Welfare.*
Oxford is a pioneer in the provision of Infant Welfare Centres, the Oxford Infant Welfare Association having been started in 1905. The Association staff and run the Welfare Centres in the City assisted financially by a Government Grant. A doctor and a Health Visitor on the Public Health

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Department staff attend each Centre. There are eleven Centres in Oxford. These Centres are primarily for the education of mothers on feeding and management of infants. The doctor medically inspects all new admissions and periodical re-inspections are carried out, but no medical treatment is given apart from advice.

There are also two Infant Consultation Centres where babies are referred for medical advice and treatment where necessary.

9. The Medical and Dental Inspection and Treatment of School Children.

Children are medically inspected as a routine at four periods in their School life, i.e. on admission, 7-8 years, 12 years, and on leaving. In addition to these inspections, children are seen at any time who show any sign of ill health. Dental Inspection is carried out as far as possible every year.

Arrangements are made with the Local Hospitals for the treatment of children with defects, and Minor Ailment Clinics are held every day in different parts of the City. A Special Class is held for Stammerers.

There is a Child Guidance Clinic with an Honorary Medical Staff attached to the School Medical Service and Backward Classes are held in many schools.

There is an Open Air School for forty children, and children go from various schools to the Wytham Country Schools provided and maintained by the generosity of Colonel R. ffennell, a class at a time going on one or two days a week.

The School Medical Officer is also the Medical Officer of Health, and complete co-ordination is possible therefore between the various services.

10. The prevention and treatment of Mental Disease, including the care of Mental Defectives.

A Joint Committee with the Oxon County Council maintain a Mental Hospital and there is a joint institution with

City of Oxford Medical Services

other authorities for the institutional treatment of the Mentally Defective.

Arrangements are made with the Radcliffe Infirmary for an Out-patient Clinic for neurological diseases. There is an Occupation Centre for the low-grade defectives. Two Mental Health Officers (women) undertake the home visiting and ascertainment of cases.

11. The prevention of Blindness and the care of the Blind.

Treatment of eye defects and diseases is undertaken at the Oxford Eye Hospital. The Welfare of the Blind includes the following: Provision of a workshop and a shop for selling the workers' goods. Supervision of homeworkers. Home teaching for Braille reading and pastime occupations. Financial assistance to unemployable blind persons, and generally to promote or arrange for the general social welfare of the blind.

12. Public Assistance.

Public Assistance for the poor is given in the form of relief. The provision and management of institutions for the chronic sick, aged, and infirm persons. Homes and Schools for destitute infants and children. Domiciliary medical attention and treatment where necessary.

NOTE. *Hospitals.* The Oxford Hospitals are Voluntary Hospitals and are not controlled by the City Council. They include the following:

1. Radcliffe Infirmary—393 beds.
2. Wingfield Morris Orthopaedic Hospital—165 beds.
3. Oxford Eye Hospital—37 beds.

INDUSTRIES IN OXFORD

MORRIS MOTORS

MORRIS MOTORS, Ltd., like so many other outstanding engineering enterprises in existence to-day, owes its origin and development to the energy, foresight, and hard work of one man—in this case Lord Nuffield (previously Mr. W. R. Morris).

He commenced his manufacturing enterprise when still young by producing bicycles in a small workshop in Oxford. These cycles soon had an enviable local reputation, since he had considerable track-riding experience and so could study their faults.

During the uphill fight for success which followed he learned a great deal about markets and suiting the public taste. He also learnt that a lasting business could only result from supplying high quality goods at equitable prices.

By 1910 the motor-car had become sufficiently reliable to promote travel. Mr. Morris had also developed by this time a substantial garage business. Motoring was still limited to the wealthy, however, so he set about to produce an absolutely reliable, cheap, and comfortable motor-car, the first of which was made in an obsolete Military College at Cowley in 1912. This first model was well received by a very discriminating public, and sales rapidly increased until the incidence of the Great War. The works then became a munitions factory.

Afterwards, with improved design, sales jumped in ten years from a mere handful to 65,000 a year. During this period he had a previously well-established and well-known cheap American car as rival. Naturally, the results of this huge expansion have been extensions to the works and improvements of methods. The Cowley Works, indeed, have recently been almost entirely reconstructed. Now the works are divided into separate factories—a foundry at Coventry, an engine factory also at Coventry, near which are the body

Industries in Oxford

works, two radiator plants in North Oxford, and some 300 separate concerns, all of which help to supply the 19,000 components used on an average Morris car. Thus the Cowley Works are now capable of producing 120,000 cars a year.

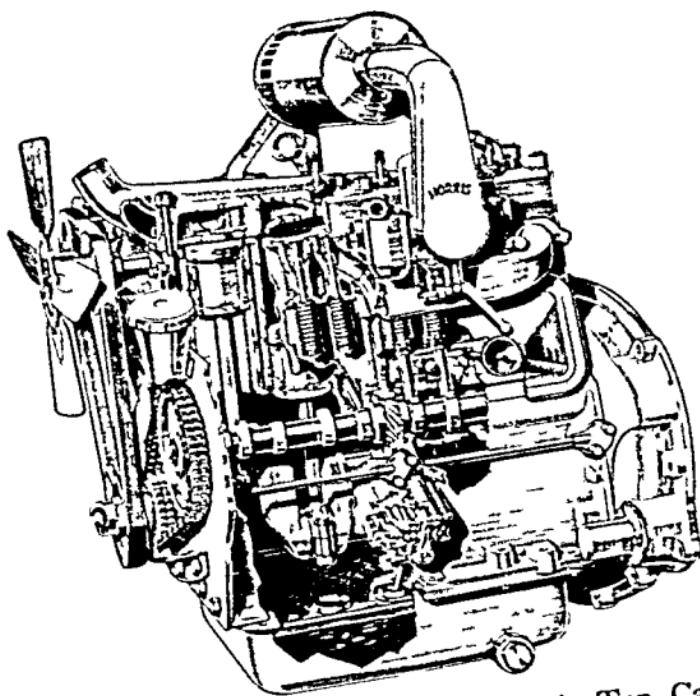
The Foundry is at Courthouse Green and is possibly the most up-to-date and well-equipped works of its kind. With a ground space of 70,350 sq. ft. it has been designed to produce best quality castings, at the highest possible speed, and as economically as possible.

To reduce transport costs the finished castings are also machined at Coventry in a special shop.

The Engine Factory, which has no less than seven floors owing to lack of ground space, is provided with the very latest specially designed machines. As an example there is the diamond turning tool, which gives the pistons a mirror-like surface within one two-thousandth of an inch of its correct size. All crankshafts are *individually* balanced, both statically and dynamically, by the Olsen method, to extremely close limits. This ensures engine smoothness. This factory turns out over 2,000 units a week for Morris cars—besides those for the Morris Commercial vehicle, Marine engines, and industrial engines—each of which includes 1,550 parts on which 1,930 machining operations are carried out and are examined 555 times during manufacture.

The Radiators Branch uses 30 tons of brass a week and its plating plant contains 3,000 gallons of solution, which, incidentally, is always deposited on nickel in Morris cars. All materials are tested regularly as well as the finished article. There are machines to produce tropical heat, arctic cold, 90 m.p.h. winds, hydraulic pressures, and finally the equivalent to road vibration.

At Cowley there are 10 miles of conveyors, including the world's largest conveyor, three-quarters of a mile long. There is also a special material-testing apparatus. This includes a mercury vapour lamp to test materials for fading, deterioration due to exposure, and variations in composition. Also there are machines for testing wood, carpet material,



The Engine of the popular Morris Ten Car
partly sectioned showing its internal construc-
tion and salient features



A section of the assembly department of the Pressed Steel
Company showing all-steel bodies in the course of construction
on the conveyors

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and safety glass. In the Experimental Department there is a machine that can give the effect of a very rough road to a finished car. Anything from frame stiffness to petrol consumption can be checked. The general arrangements for distribution of stores consists of an ample conveyor and overhead travelling crane service, which ensures smoothness of assembly and minimum human movement. A large staff is employed to check each sample as it enters the works, and each car is constantly inspected as it is being assembled.

As regards after-sales service, Morris Motors, Ltd., have developed, among others, one very successful idea. All of the 2,000 odd Authorized Dealers are bound to charge the same price for each individual repair as is indicated in the leaflet given to all owners, and as fixed by the firm.

Owing to Lord Nuffield's foresight, Morris Motors have by now stored up a reserve of money, which would easily tide over any possible bad period of trade.

Morris employees have a large club, which they can join for twopence a week, and which provides for at least fifteen indoor and outdoor recreations. To encourage thrift the workers also have a 'Provident and Savings Club'. All the shops are healthy and well lit, and each is fitted with a First Aid outfit, as well as the excellent works nurse and clinic. An efficient Ambulance Brigade can remove a man to hospital within ten minutes. Finally, the welfare and health of the employees is looked after by the special Welfare Department.

Exports are an important factor for Morris Motors. Dunlop extra-low pressure tyres are fitted to all export models, and left-hand steering is optional. The former are a great advantage in rough or sandy country. There are well over a hundred subsidiary firms abroad in all parts of the world which act as main distributing centres, and which also hold large supplies of spare parts to supplement those of ordinary distributors and dealers.

Indeed, the success of Morris cars abroad may be attributed both to their own excellence and to the very thorough after-sales service established throughout.

**PRESSED STEEL COMPANY LIMITED
COWLEY, OXFORD**

By J. C. ARROWSMITH, M.MET.

THE last quarter of a century has seen great advances in the art of fabricating sheet steel by cold pressing in dies, and at the same time there has been a rapid increase in the number of applications of pressed steel products. On account of the combination of strength and lightness afforded by pressings, their use was rapidly developed in the automobile industry. The flat and simply curved steel panels formerly used for the outer covering of motor-car bodies were replaced by pressings, and this enabled a reduction to be made in the number of unsightly joints. The faults inherent in the wooden framework of the body over which the panels were applied led engineers to develop an all-steel construction in which the panelling of the body served the dual purpose of structural member and outer covering.

By this time a highly specialized technique had been developed in the construction of dies, their operation on large-power presses, and the assembly of pressings by welding. In the autumn of 1926 the Pressed Steel Co., Ltd., commenced operations at Cowley, Oxon., with a view to supplying the automobile trade in this country with all-steel bodies. From the viewpoint of accessibility to the large automobile-producing centres Oxford offered an ideal situation on account of its central position. It was correctly visualized that there would be a rapidly increasing demand for this type of body as soon as its many advantages had been demonstrated, so a factory was constructed which occupied approximately 11 acres on a 35-acre site. Within twelve months a substantial production of completely finished all-steel bodies per week was obtained. Since then, the constantly increasing demand for this type of body has necessitated the construction of additional workshops until at the present date the factory buildings cover an area of approximately 15 acres, and pro-

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duce weekly well over 2,000 all-steel bodies and components for same, as well as panels, &c., for hundreds of bodies of other types. The increased production has been accompanied by improvements in design of the bodies and more efficient methods of construction. The general tendency has been to reduce the number of component parts, and consequently the number of joints, in the body structure. The entire body side is now pressed from a single sheet of steel and includes both door openings and rear quarter window.

The factory possesses one of the largest machine shops for the exclusive production of dies in Europe, which makes possible the construction of the tools necessary for a new model in the minimum of time. The main press shop, which is 1,100 feet long with a 60-foot single span roof over its entire length, houses the very considerable number of large-power presses necessary for the production of body panels and structural members. The assembly department is equipped with jigs for the accurate building up of the body parts, conveyors for continuous production, and a mass of electric-welding equipment for making the joints between the various body parts. A proportion of the bodies are painted and trimmed in an adjoining shop, whilst the remainder of the production is dispatched in the form of body shells or sets of panels for assembly by the customer.

The all-steel body of the type which is now being produced owes its popularity to its superior strength and durability, its lighter weight, the safety which it offers, and its attractive appearance. Its use is now quite general among all the large producers of motor-cars.

In 1932 it was decided to begin manufacturing *Domestic Refrigerators*. Up to this time practically the whole of the refrigerators sold in this country were imported from abroad, and there had been a steadily growing demand for them. The equipment and experience of the Pressed Steel Co. were particularly adaptable to the manufacture of this new product and in a comparative short space of time a special department was producing a domestic refrigerator known as

the *Prestcold*, comparable in performance, appearance, and price with any other on the market.

The Refrigeration section has made rapid strides and is now producing a range of models for domestic requirements, from the smallest size with a food storage space of 2·4 cubic feet to one with a capacity of 11·2 cubic feet. A highly efficient refrigerating unit has been developed, embodying a sulphur dioxide compressor of the direct connected reciprocating type. Every effort has been made to ensure maximum reliability, long life, and silent running, both in design and by extreme accuracy and care in production. One section of the department is devoted to the machining and assembly of the parts of the unit, whilst the neighbouring section deals with the cabinet assembly and painting. The cabinets are of all-steel construction, embodying panels and structural members produced in the main press shop. All the steel work is given a special rust-proofing treatment before applying the paint in order to protect the refrigerator from attack by the most humid atmosphere in which it is liable to be placed.

Since the efficiency of a refrigerator is directly dependent upon the means adopted to insulate the interior food chamber from the exterior of the cabinet, the most careful attention has been given to this subject. The most commonly adopted insulator is cork, having a conductivity of 0·30 B.T.U.s per square foot per hour for 1 inch thickness and 1° F. difference in temperature, but a special insulating medium known as 'Kolpak' has been developed for use in the *Prestcold* refrigerators which has the remarkably low conductivity value of 0·24 B.T.U.s.

The laboratory facilities of the Pressed Steel Co., Ltd., have been utilized to the fullest extent in the technical development of the refrigerators. Amongst the many investigations which have thus been made possible is an analysis of the noise element. Special noise-measuring and detecting equipment have enabled the engineers to eliminate at the source all offensive sounds set up in the mechanical unit.

From the range of domestic models production has now

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extended to small commercial refrigerators of 20-50 cubic feet capacity, display counters for shops, ice cream conservators, and larger commercial refrigerating machines.

There is little doubt that there is a vast potential demand for household and commercial refrigerators, and that the British product of the Cowley works will more than hold its own against foreign competition.

W. LUCY AND COMPANY, LIMITED
(*Electrical Engineers, Eagle Ironworks, Oxford*)

By J. R. DICK

THERE appears to have been in existence as far back as the year 1760, on the present site, a small engineering establishment, presumably engaged mainly in wrought iron and blacksmiths' work. This was about a dozen years before the well-known firm of Messrs. Boulton & Watt started their partnership for the production of steam-engines in Birmingham.

In those early days, and for a considerable subsequent period, the activities of the Eagle Ironworks did not go beyond wrought iron of a domestic character, or for College and Ecclesiastical decoration. We have no accurate record of what was done in this province, but several examples are well known in Oxford, for instance, the handsome wrought iron gates of Trinity College garden, and the Garden Railing and Gate of New College.

Over a hundred years ago an Iron Foundry was set up, and this is still one of the main features of the concern. No doubt the bulk of the castings then made was for agricultural and domestic purposes, to which, later on, a number of engineering types were added. Up till about forty years ago there was not much change in the character of the goods produced, which, however, had become preponderantly cast iron instead of wrought iron. From about 1890 onwards, however, the firm began to supply a number of castings and other appliances for the distribution of electricity, which was then beginning to take substantial shape under the Electric Lighting

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Acts. Up to the present day the tendency to specialize in the production of control appliances for the electrical industry has become more pronounced. Most of the heavy types of these electrical products require substantial wrought iron frames and cast iron casings, and, with the progress of the business, there has been a considerable growth in both the original Forge and Foundry. Of course, much has been added for the design and manufacture of heavy electrical switchgear and control apparatus generally, and new factories for the production of switchgear now adjoin the original foundry and forge. These electrical goods are now more than 90 per cent. of the total output of the Works.

There is one section of Lucy & Co.'s activities which originated in a great measure due to their being established in a University City. The problem of storing books in the Bodleian and College Libraries in such a manner as to minimize fire risk has always been of great importance, and the advantages of using metal instead of wood for book shelving is very evident. Lucy & Company have supplied many hundreds of thousands of feet of fire-proof shelving, not only in their own city of Oxford, but throughout England, and in various parts of the world as far apart as Rhodesia, India, Finland, &c.

Although the energetic growth of the electrical industry has rather dwarfed the importance of enamelled steel shelving for book storage, &c., this still remains one of the products in which the firm specializes.

About thirty years ago there were about fifty employees, but now the number is considerably over 400.

SOME OXFORD INDUSTRIES

By RAYMOND ALDEN, President of Oxford Chamber of Trade

THE popular conception of Oxford as the home of a renowned university, and—latterly—as the place of origin of certain well-known motor-cars, does the City less than justice, and it is the purpose of this article to speak of industries which flourish within its boundaries, some comparatively new,

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others of considerable antiquity, but all, in their own particular spheres, of interest.

That the ubiquitous building industry has been well established in Oxford from very early times is apparent, generations of capable craftsmen leaving monuments of enduring testimony to their skill, if not their names, whilst modern times have brought the need for so much construction and extension that the City has grown amazingly beyond its ancient walled enceinte. Small wonder, then, that local building firms have succeeded in creating organizations which have obtained notable contracts throughout the country.

Printing, represented by a number of establishments, takes a prominent place to-day in the City's industries; a considerable proportion of the better-class books published in the British Isles bear Oxford imprints, and many notable literary works have been and are being printed here. The famous Oxford University Press, of course, has pride of place in this activity. Its historical record is sufficiently remarkable to justify an article to itself, but it may be mentioned here that the first book printed at Oxford bears the date '1468'. There is some reason to believe that this was a mistake, and that 1478 was intended, from which date there was intermittent production of books until the year 1585 in which Joseph Barnes was given the licence to call himself 'typographus academicus' and was lent £100 by the University to assist his early beginnings. Printing for the University has gone on in the Town ever since. The first official home of printing was the Sheldonian Theatre which was opened in 1669; the second was the adjoining Clarendon Building which was built early in the eighteenth century; and in 1830 the Bible and secular presses moved to their present home in Walton Street. The Press has its own paper mills at Wolvercote (one product, the Oxford 'India' paper, is unique), type-founding and photographic departments, and has attained an organization so well considered and equipped as surely to have few serious rivals in the world. The products of the Oxford University Press really speak for themselves, but it

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should be noted that the Press has the privilege of printing Bibles, and mention made of that truly monumental work in ten volumes, containing 414,825 words with 1,827,306 illustrative quotations, the *Oxford English Dictionary*.

Apart from the University Press, two printing firms in Oxford have the distinction of having been established for more than a century—those of Vincent and the Alden Press—and it is interesting to observe that both are controlled to-day by direct descendants of their founders.

From printing to boat-building may seem a far cry, but Oxford has a notable (if miniature, compared with maritime standards) boat-building industry. The well-known firm of Salter Brothers, of 'Oxford and Kingston steamers' fame, has yards in which for seventy-five years have been built all kinds of river-going craft, from the highly specialized racing skiff to quite large steam- and motor-driven boats. Indeed, paddle-wheel steamers in use for Mission work on the Congo river of Africa were built in these yards. The quality of Oxford-built boats has built up a regular export trade, so that one may, in the most unexpected places of the world, embark upon craft made by Salter. The firm builds its own Thames steamers and maintains in commission a fleet so large that it has on occasion carried parties of seven thousand persons!

It was in the kitchens of the Angel Hotel, in High Street, Oxford, in the year 1874, that Mrs. Frank Cooper first made 'Oxford Marmalade'. From a few friendly gifts this famous preserve soon became a regular feature upon College tables, and the delicacy seems to have entered curiously into the life of University men, so much so that it is even hinted—admittedly upon somewhat doubtful authority—that a certain quantity must be consumed before one can secure a degree! At any rate, as its devotees scattered year by year the marmalade became world-famous and is now dispatched to almost every quarter of the globe. The manufacture is carried on by Messrs. Frank Cooper Ltd., in a model factory in Park End Street, Oxford, care being taken to retain the original 'home-made' style.

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And whilst engaged upon the consideration of food we should not forget the Oxford Sausages, produced in Oxford, and well known throughout the country.

The wholesale manufacture of furniture is one of the lesser known, but nevertheless important, local industries. The name of Baker has figured in this connexion for more than a century, and the firm of Wm. Baker & Co. has furnished the palaces of Indian Princes and many hospitals and institutions throughout the land.

The specialized furnishing products of the Minty factory in Oxford have achieved national distribution, and Oxford has also the firm of Greenings, employing more than 250 craftsmen, and exhibiting a flair for design which has secured for their furniture the entrée into the most exclusive circles. Greenings' output is distributed solely through the retail trade.

Local engineering is dealt with elsewhere in this book, but the firm of John Allen & Sons at Cowley merits reference, if only for the enterprising variety of its undertakings which include road-making (with the construction of the necessary plant) and the designing and manufacture of agricultural and much other machinery. Rumour has it that this firm once successfully carried out an order for a complete roundabout of the kind which provides equestrian exercise at fairs and fêtes!

It remains to be said that gloves, fur and sheepskin goods are manufactured in Oxford, that paper is made at Sandford, cement at Shipton-on-Cherwell and Kirtlington, and to record the happy fact that unemployment figures in Oxford are amongst the three or four lowest in the kingdom.

SOME BOOKS ON OXFORD
GUIDE-BOOKS AND VIEWS OF OXFORD

Oxford and Its Colleges. By Joseph Wells. 1926. (Methuen.)
4s. net.

Alden's Guide to Oxford. 1935. 1s. net and 2s. 6d. net.

Mowbray's Guide to Oxford. 1930. 3d. net.

A Handy Guide to Oxford. By C. R. L. Fletcher. 1926.
(Oxford University Press.) 1s. net.

The New Loggan Guide to the Oxford Colleges. Drawings by
E. H. New; Letterpress by E. G. Withycombe. 1932.
(Blackwell, Oxford.) 3s. 6d. net.

Guide to Oxford and District. 1926. (Ward, Lock.) 2s. net.

A Day in Oxford. (Alden, Oxford.) 4d. net.

Picturesque Oxford. 1926. (Alden, Oxford.) 1s. net.

Round about the 'Mitre' at Oxford. 1929. (Mitre Hotel,
Oxford.) 2s. 6d. net and 3s. 6d. net.

Just Oxford—Camera Pictures. 1929. (Homeland Associa-
tion.) 1s. net.

Oxford. By J. E. Morris. 1911. (Beautiful Britain: Black.)
1s. net.

Oxford: a Sketch-book. By F. Richards. 1928. (Black.) 2s. 6d.
net.

Oxford Cathedral. By S. A. Warner. 1924. (S.P.C.K.)
7s. 6d. net.

The Charm of Oxford. By Joseph Wells. New edition, 1934.
10s. 6d. net. Drawings by W. G. Blackhall also pub-
lished separately in a portfolio, 42s. net. (Simpkin
Marshall.)

Oxford Colleges and University Buildings. 1932. (Country
Life.) 3s. 6d. net and 2s. 6d. net.

Oxford Water-Colours. By John Fulleylove, R.I. (Black.)
1s. net.

100 Views of Oxford. (Penrose and Palmer.) 1s. net.

About and Around Oxford. (E. J. Burrows.) 6d. net.

Walks around Oxford. 1s. net.

Some Books on Oxford

Philip's 'Wayabout' Maps: *Pictorial Map of Oxford.* 1s. net.
Oxford Outside the Guide Books. By Falconer Madan. 1925.
(Blackwell, Oxford.) 3s. 6d. net.

A Guide for Visitors to the Bodleian Library. By Andrew Clark. 1906. (Oxford University Press.) 2s. 6d. net.

Some Oxford Libraries. By Strickland Gibson. 1914. (Oxford University Press.) 2s. 6d. net.

The Divinity School, Oxford. By H. E. Legge. 1924. (Blackwell, Oxford.) 2s. net.

The Oxford Degree Ceremony. By Joseph Wells. 1906. (Oxford University Press.) 2s. 6d. net.

Oxford University Ceremonies. By L. H. Dudley Buxton and S. Gibson. 1935. (Clarendon Press.) 6s. net.

Arms and Blazons of the Colleges of Oxford. By F. P. Barnard and T. Shepard. 1929. In full colour. (Oxford University Press.) 3s. 6d. net.

GENERAL WORKS

A History of the University of Oxford. By Sir Charles Mallet. 3 vols., 1924-7. (Methuen.) 21s. net each.

Oxford: Its Place in National History. By Sir John Marriott. 1933. (Clarendon Press.) 6s. net.

Handbook to the University of Oxford. 1933. (Clarendon Press.) 5s. net.

The Older Universities of England: Oxford and Cambridge. 1923. (Longmans.) 7s. 6d. net.

Oxford: Historical, Architectural, Pictorial. By E. C. Alden. (Alden, Oxford.) 2s. net.

Oxford and Its Story. By C. Headlam. 1926. (Dent.) 10s. 6d. net.

The Story of Oxford. By C. Headlam. 1931. (Dent.) 5s. 6d. net.

Oxford. By C. Headlam. 1925. (Dent.) 1s. net.

Oxford. By F. D. How. 1910. (Blackie.) 2s. 6d. net.

Oxford. By A. Lang. 1914. (Seeley, Service.) 7s. 6d. net.

The Story of Architecture in Oxford Stone. By E. A. G. Lamborn. 1931. (Oxford University Press.) 5s. net.

Some Books on Oxford

Oxford. By E. Thomas. 1922. (Black.) 7s. 6d. net.
Almae Matres. By R. Thompson. 1923. (Blackwell, Oxford.)
5s. net.
Oxford Ways. By W. Blair. 1925. (Blackwell, Oxford.)
2s. 6d. net.
Things Seen in Oxford. By N. J. Davidson. 1927. (Seeley,
Service.) 3s. 6d. net.
The Mirror of Oxford. By C. B. Dawson. (Sands.) 3s. 6d
net.
The Glamour of Oxford. Edited by W. Knight. 1911. (Ox-
ford University Press.) 6s. net.
Oxford Yesterday and Memories of Oxford Seventy Years Ago.
By W. E. Sherwood. 1927. (Blackwell.) 2s. 6d. net.
Reminiscences of Oxford. By Rev. W. Tuckwell. 1901. (Mur-
ray.) 7s. 6d. net.
Good Stories from Oxford and Cambridge. Edited by T. S.
Henry. 1931. (Simpkin Marshall.) 5s. net.
Monastic Remains near Oxford. By E. S. Bouchier. (Alden,
Oxford.) 1s. net.
Notes on the Stained Glass of the Oxford District. By E. S.
Bouchier. 1918. (Blackwell, Oxford.) 2s. 6d. net.
Highways and Byways in Oxford and the Cotswolds. By H. A.
Evans. 1924. (Macmillan.) 7s. 6d. net and 5s. net.
Kingham Old and New. By W. W. Fowler. 1913. (Blackwell,
Oxford.) 2s. 6d. net.
Three Centuries in North Oxfordshire. By M. S. Gretton
1902. (Blackwell, Oxford.) 1918. 2s. 6d. net.
Oxford Renowned. By L. Rice-Oxley. Revised and abridged,
1934. (Blackwell, Oxford.) 7s. 6d. net.